

C Reassembly and Adjustment Procedures

C-1 Reassembly and Adjustment of Ass'y Parts

C-1-1 Assembly of Shutter Charge Base Plate

1. Install the Multi-Exp. Release Lever Spring (1AA48310) on the Multi-Exp. Release Lever located in the back side of the Shutter Charge Upper Base Plate Ass'y (1AAA610).

And fix it with an adhesive (Cemedine 551A).

2. Install the Shutter Charge Motor (1AA51510) on the Shutter Charge Lower Base Plate Ass'y (1AAAA640) and tighten the Shutter Charge Motor Setscrews (61912226)×2.

3. Install the Control Lever Spring (1AA47010) (Pay attention to the direction)

4. Install the Aperture Set Arm Spring (1AA47100), secure it with the E Ring (66101512) and fix the Aperture Set Arm Sprig with an adhesive (Cemedine 551A).

5. Install the timing Switch (17441320) and tighten the Timing Switch Setscrew (63904022).

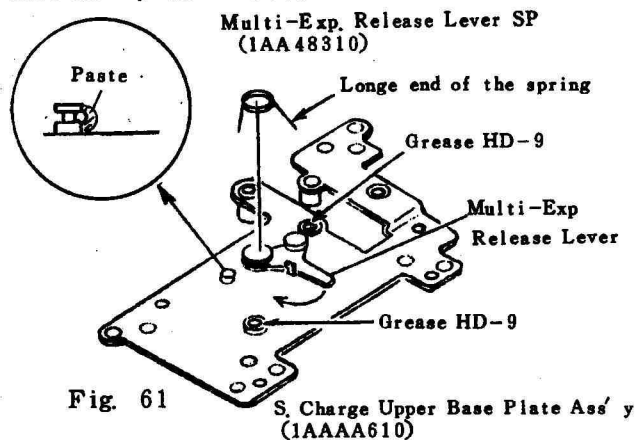


Fig. 61

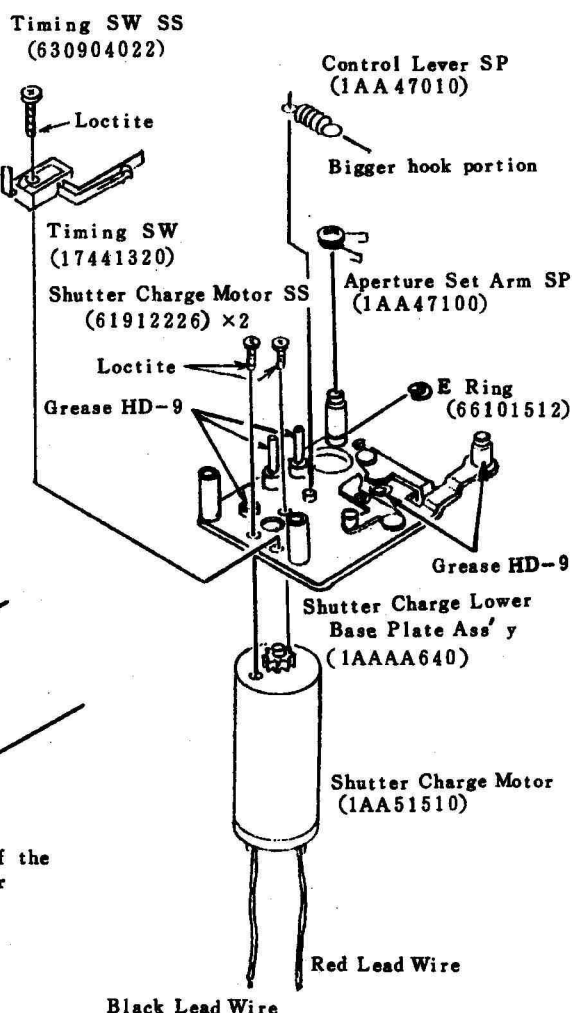


Fig. 62

Attach Aperture Set Arm SP with adhesive

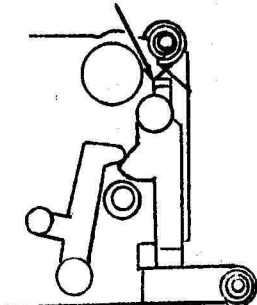


Fig. 63

Solder inner sides of the lead wires of Shutter Charge Motor

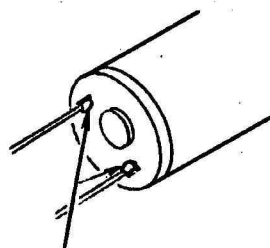


Fig. 64

6. Install the Shutter Charge Cam Ass'y so that the Control Lever Pin is set in the groove below the Shutter Charge Cam Ass'y.
7. Install in the order of the Shutter Charge Lever Ass'y (1AAAA630), the Friction Gear Ass'y (1AAAA620), the Shutter Charge Gear (4)(1AA46200) and Shutter Charge Gear (3)(1AA46110).
8. While sliding the Multi-Exp. Release Lever located under the Shutter Charge Upper Base Plate Ass'y (1AAAA610) in the direction of the arrow,(See Fig 66) install the Shutter Charge Upper Base Plate Ass'y.

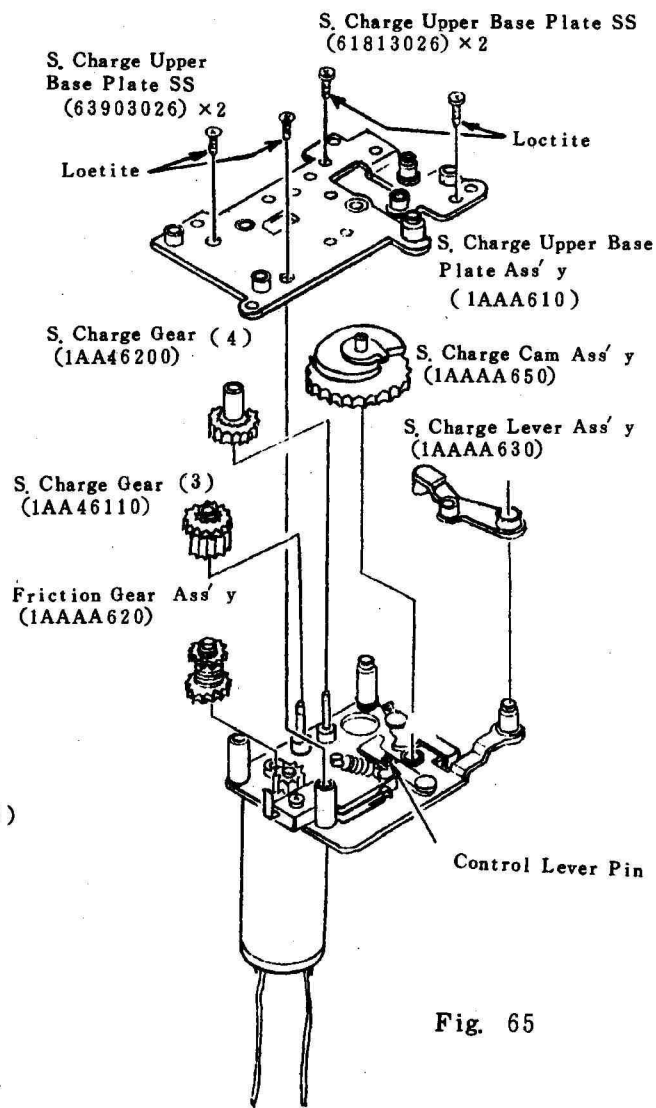


Fig. 65

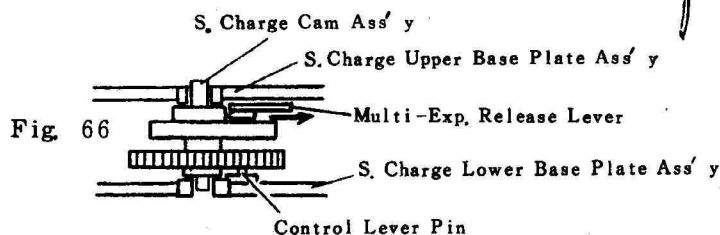


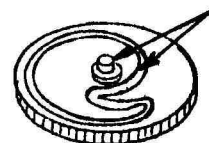
Fig. 66

9. Tighten the Shutter Charge Upper Base Plate Setscrews (61813026)×2, (63903026)×2.

(Diagram for applying grease on S. Charge Cam Ass'y)



Fig. 67



Bottom view

Fig. 68

[Confirmation of operation of Shutter Charge Cam Ass'y]

Turn the Shutter Charge Cam clockwise

① (mirror up direction) until it stops

and turn it counterclockwise
② (shutter charge) Check if it turns smoothly.

Make sure that there is no stumble or unevenness.

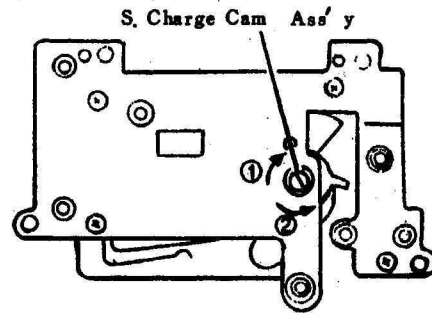


Fig. 69

The start position (initial position) of a shutter charge is where the S₁ charge stops after turning it clockwise.

[Adjustment of the Timing Switch interval]

- a) With the Shutter Charge Cam Ass'y in the initial position, the Timing Switch interval shall be more than 0.6 mm.

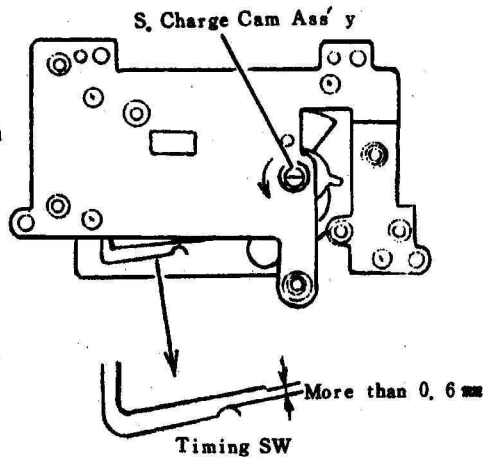


Fig. 70

- b) When the Shutter Charge Cam is rotated for approximately 240° with the Shutter Charge Cam Ass'y turned counterclockwise, the Timing Switch shall be contacted without fail. And when the Shutter Charge Cam is further turned counterclockwise and it comes back to the initial position, the Timing Switch shall be in the OFF position.

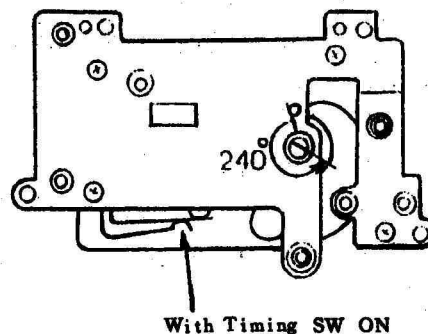
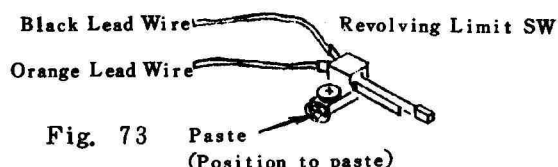


Fig. 71

C-1-2 Assembly of Winding Unit Ass'y

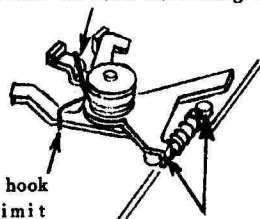
1. Fit the Revolving Limit Switch (1AA57310) to the Winding Upper Base Plate Ass'y (1AAAA600) and secure it with the Revolving Limit Switch Setscrew (61922526). Attach the Revolving Limit Switch with an adhesive (cemedine 551A). (See Fig. 73).



2. Install the Revolving Limit Lever Ass'y (1AAAA670) and the Revolving Release Lever Ass'y (1AAAA590).

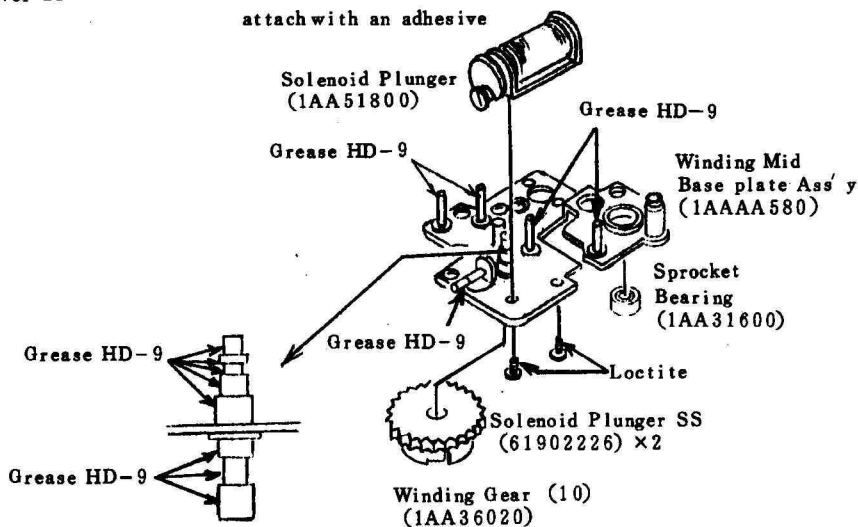
3. Install the Revolving Release Lever Spring (1AA31030) and attach the both ends with an adhesive (cemedine 551). (See Fig. 74)

Position to hook Revolving Limit Lever SP



4. Install the Revolving Limit Lever Spring (1AA30920). (See Fig. 74)
5. Install the Sprocket Shaft Ass'y (1AAAA780).

6. Place the Solenoid Plunger (1AA51800) on the Winding Mid Base Plate Ass'y (1AAAA580) and secure it with the Solenoid Plunger Setscrews (61902226)×2.



7. Install the Sprocket Bearing (1AA31600).
8. Install the Winding Gear (10) (1AA36020).

Revolving Limit SW SS (61922526)

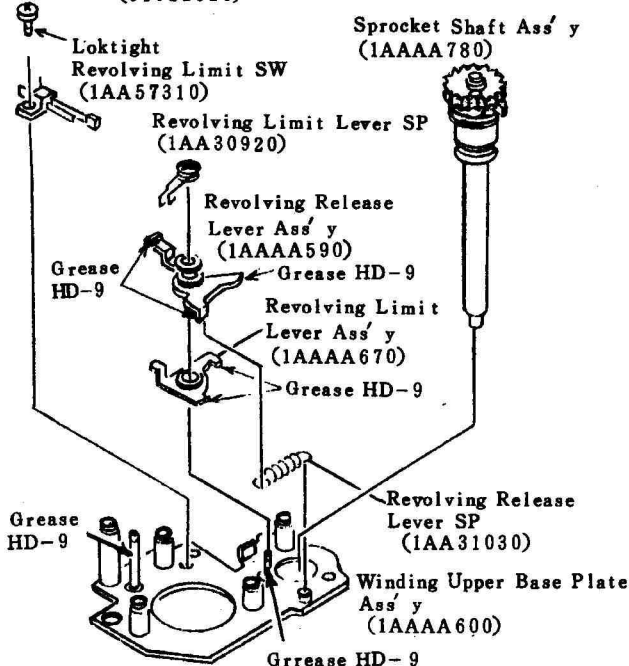


Fig. 72

Fig. 74

Fig. 75

9. Fit the Winding Mid Base Plate Ass'y to the Winding Upper Base Plate Ass'y and secure it with the Winding Mid Base Plate Setscrews (660001068)×3, (66001039).

10. Install the Release Lever Hook Ass'y (1AAAA680).
11. Install the Release Lever Hook Spring (1AA33720).
12. Install the Rewind Lever Hook Ass'y (1AAAA690), and hook up the Release Lever Hook Spring with both the release Lever Hook Ass'y and the Rewind Lever Hook Ass'y. (See Fig 77)

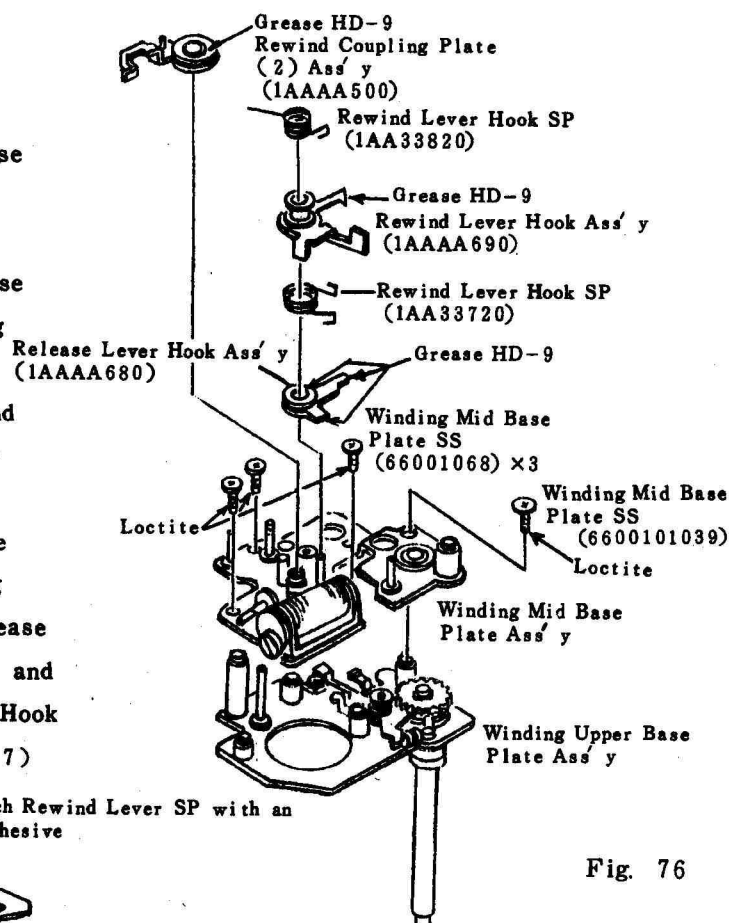


Fig. 76

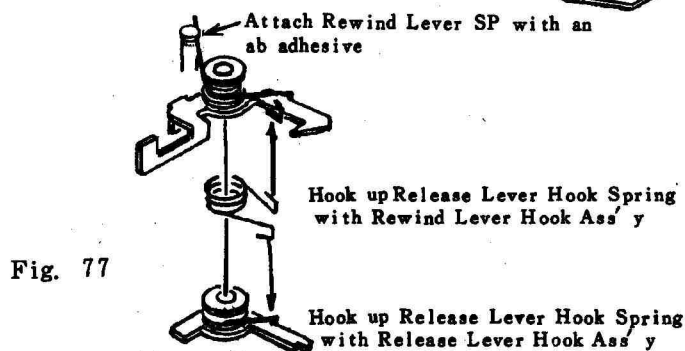


Fig. 77

13. Install the Rewind Lever Hook Spring (1AAAA690), hook up the both ends with Rewind Lever Hook Ass'y and the post respectively and attach with an adhesive (Cemedine 551A). (See Fig. 77)
14. Install the Rewind Coupling Plate (2) Ass'y (1AAAA500).

15. Install the Rewind Coupling Plate (1) Ass'y to the Winding Unit Sub Ass'y.

Note : After install the Rewind Lever Ass'y (1AAAA560) to the Rewind Coupling Plate (1) Ass'y (1AAAC320), fit it to the Winding Unit Sub Ass'y. (See Fig. 79)

- ① Hook the Rewind Coupling Plate Spring (1AA37830) with the Rewind Lever Ass'y..... ②.
- ② Install the Rewind Coupling Plate (1) Ass'y to the Rewind Lever Ass'y, and secure it with the E Ring (66101225).
- ③ Hook the Rewind Coupling Plate Spring with the Rewind Coupling Plate (1) Ass'y..... ③.

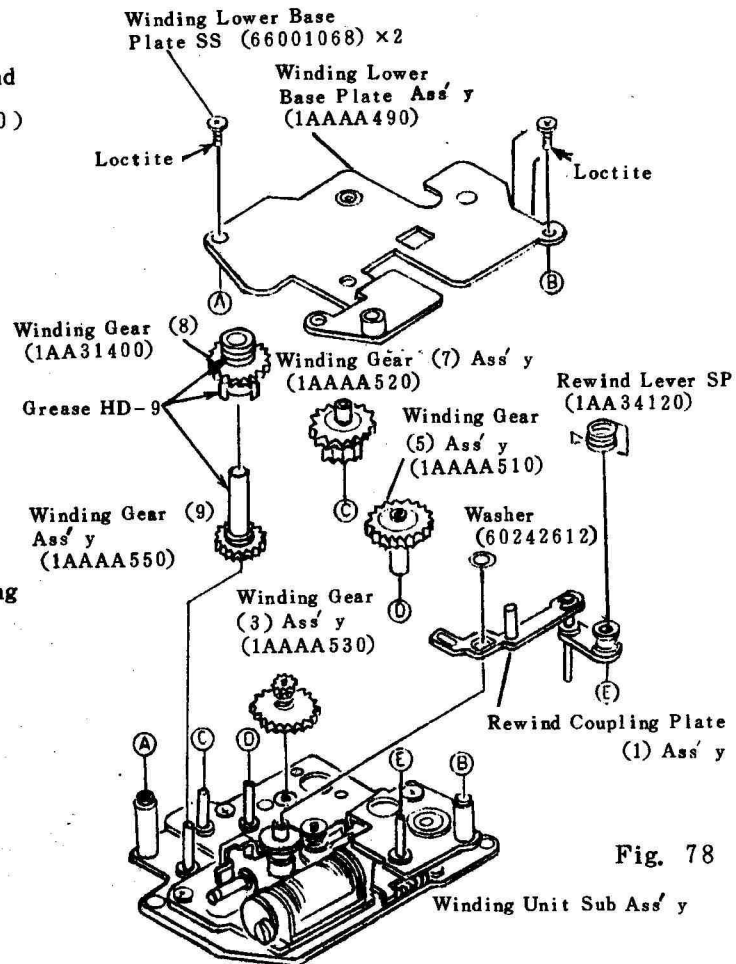


Fig. 78

16. Install the Rewind Lever Spring (1AA34120). (See Fig. 80)
17. After fitting the Winding Gear (8) (1AA31400) and the Winding Gear (9) Ass'y (1AAAA550) together, install it to the Winding Unit Sub Ass'y.

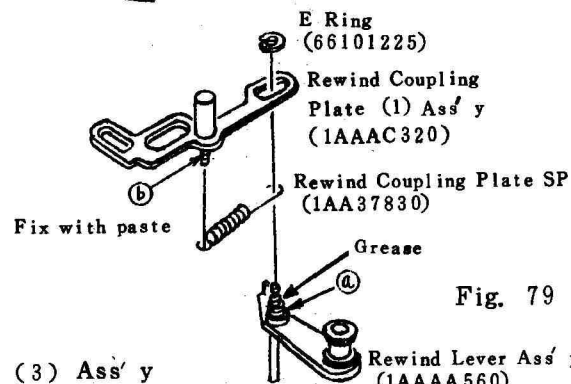
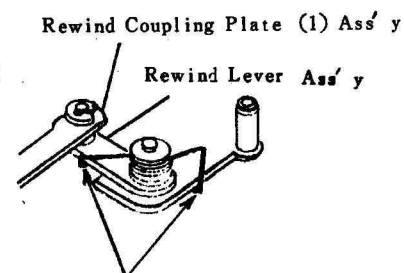


Fig. 79

18. Install in the order of the Winding Gear (3) Ass'y (1AAAA530), the Winding Gear (7) Ass'y (1AAAA520) and the Winding Gear (5) Ass'y (1AAAA510).
19. Place the Washer (60242612) on the Rewind coupling Plate (1) Ass'y.
20. Install the Winding Lower Base Plate Ass'y (1AAAA490) and secure it with the Winding Lower Base Plate Setscrews (66001068)x2.



Hook up Rewind Lever SP like this.

Fig. 80

21. Install the Clutch Lever Ass'y (1AAAA540) and Secure it with E Ring (66101225).
22. Install the Clutch Lever Down Spring (1AA34710). Hook up the Clutch Lever Down Spring and attach it with an adhesive (Cemedine 551A).

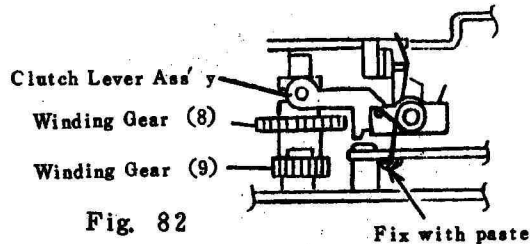


Fig. 82

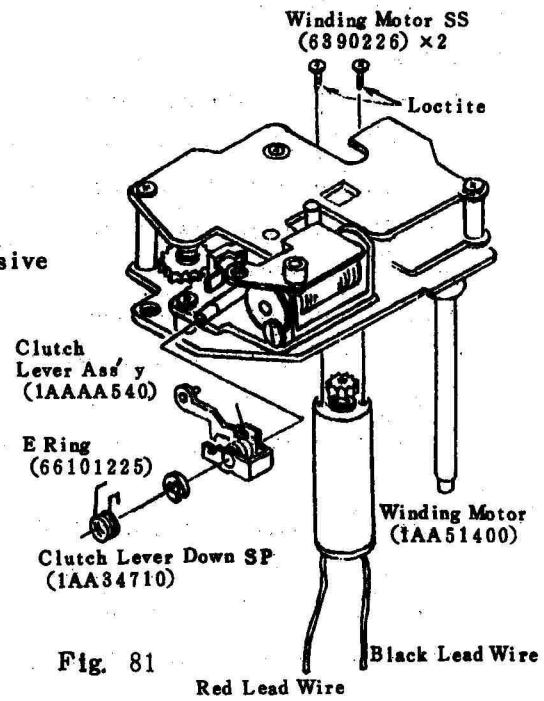


Fig. 81

23. Install the Winding Motor (1AA51400) and secure it with the Winding Motor Setscrews (63902226) x 2.
24. Apply Grease HD-9 to each gear. Each gear shall turn smoothly without noise, stumble or unevenness.

[Confirmation of Revolving Limit Switch]

- a) During the revolution of the Sprocket shaft, the Revolving Limit Lever and the Revolving Limit Switch shall not be in contact. (See Fig. 83)
- b) When the tip of the Revolving Limit Lever goes in by about half deep in the groove of the Sprocket Cam (located under the Sprocket Gear), the Revolving Limit Switch shall be OFF.

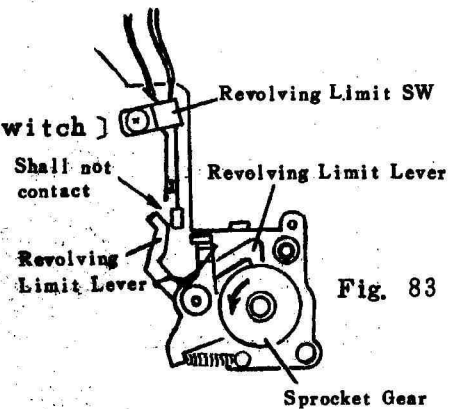


Fig. 83

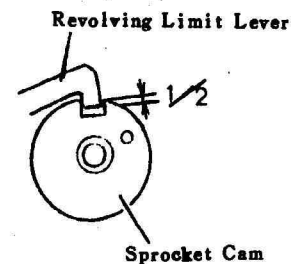


Fig. 84

C-1-3 Assembly of Winding Lower Base Plate Ass'y

1. Install the Photo-interrupter (1AA52600) to the Perforation FPC (1AA55900) and solder the five terminals on the Photo-interrupter. Cut off the terminals of the Photo-interrupter.
2. Apply an adhesive (cemedine 551A) to the Winding Photo-interrupter Retainer and fix it to the Photo-interrupter. (See Fig. 85)
3. Install the Winding Encoder Ass'y (1AAAA850) to the Winding Lower Base Plate Sub Ass'y (1AAAA840) and secure it with the E Ring (6610225).
4. Install the Washer (60121810) and PF-FPC Ass'y (1AAAA750), and tighten the PF-FPC Ass'y Setscrew (61911526).

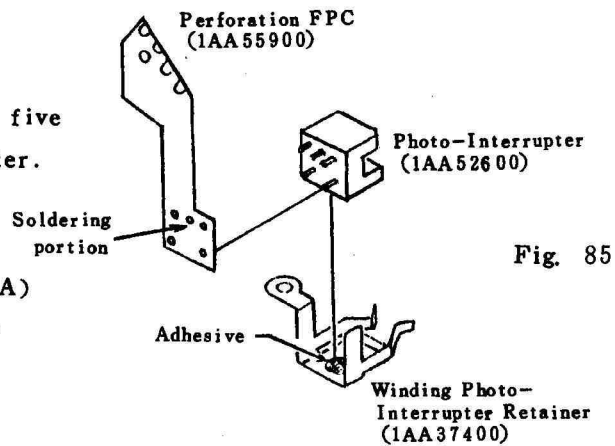


Fig. 85

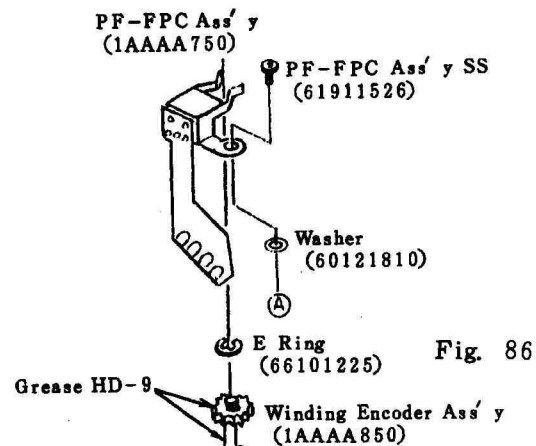


Fig. 86

[Applying Grease in Sprocket Shaft Ass'y]

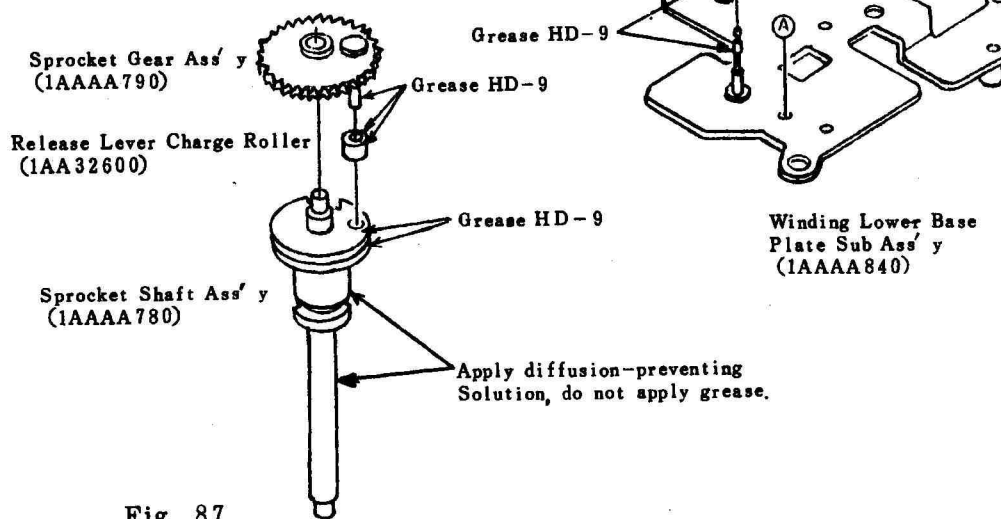


Fig. 87

C-1-4 Assembly of Rewinding Base Plate Ass'y

1. Install the Cam Board (1AA41800) and Cam Board Setscrews (61901522)×2.
2. Install the Rewind Motor (1AA51300) and secure it with the Rewind Motor Setscrews (61802226)×2.
3. Clean the contacts of the Cam Board Pattern and contact of Cam Gear Ass'y with ether-alcohol, and install the Cam Gear Ass'y (1AAAA950).
4. After installing the Rewind Epicyclic Gear (1) (1AA40800) to the Epicyclic Gear Ass'y (1AAAA450), fit it to the Rewind Base Plate (S) Sub Ass'y (1AAAA920).
5. Install the Rewind Gear (1) (1AA40600) and the Rewind Gear (2) (1AA40600).
6. Install the Rewind Gear (4) (1AA43200) to the Rewind Base Plate (L) Ass'y (1AAAA440) and then fit it to the Rewind Base Plate (S) Sub Ass'y.
7. Tighten the Rewind Base Plate (L) Setscrews (61813026)×3.

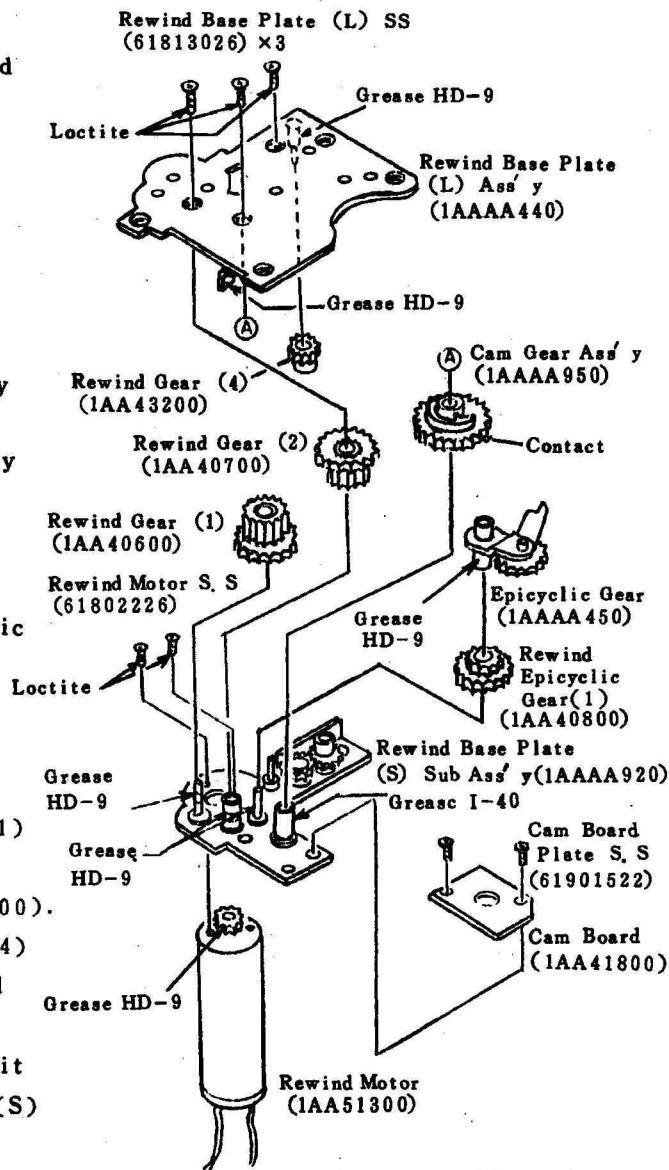


Fig. 88

[Diagram for pasting Acetate Cloth Tape to Rewind Motor]

After repairing the Rewind Motor, paste the Acetate Cloth Tape as illustrated in the Fig. 89 partly wrapping the top of the motor by 3 to 5mm, in order to prevent possible short-circuiting upon contact between the resistors on the Sub FPC and the motor.

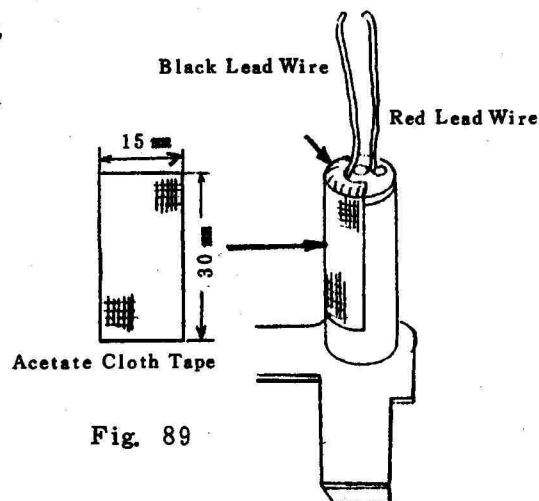


Fig. 89

C-1-5 Assembly of ISO Dial Base Plate

1. Clean the Drive FPC (1AA55300) Connector with ether-alcohol.
2. Install the Release Base Plate (1) Ass'y (1AA56500), the Drive FPC and the Counter LCD Holder (1AA28700), and secure them with the Counter LCD Holder Setscrews (61813026)×2.
3. Clean the pattern of the ISO P.C. Board (1AA56300) with ether-alcohol, install the ISO P.C. Board and secure it with the ISO P.C. Board Setscrews (61912026)×2.
4. Solder the Release Base Plate (1) Ass'y and the Drive FPC (6 terminals). Wipe the soldered portion with either-alcohol.
5. Fix the Mylar Films to cover two soldered area on the Drive FPC and the Release Base Plate.
6. Fix the Maylar Films and the Drive FPC with cemedine 551. (See Fig. 91)

Note : a) Apply Loctite to setscrews in the tip (2-3 pitch).

b) Patter of Drive FPC (1AA55300) to be modified, the Maylar Film is discontinued.

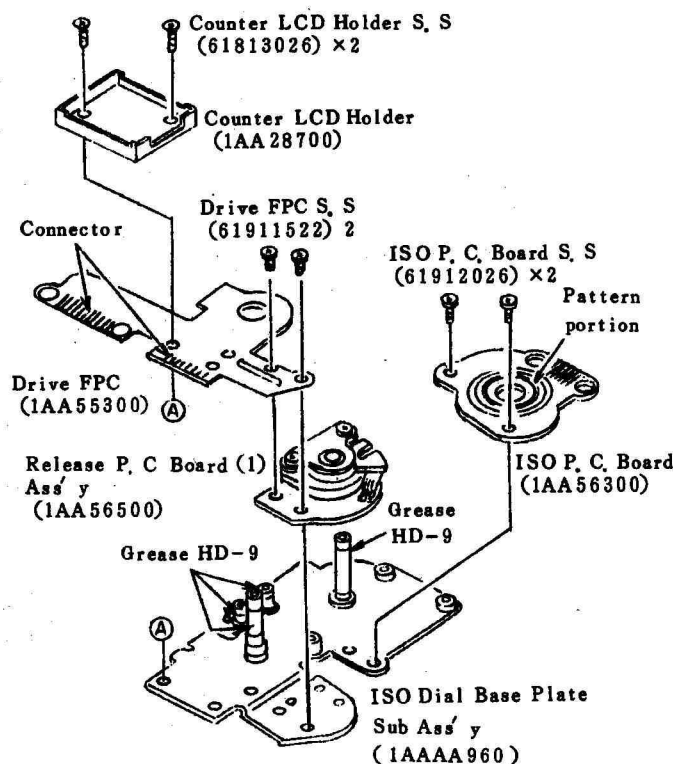


Fig. 90

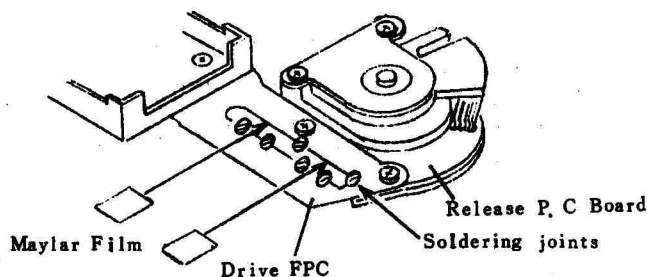


Fig. 91

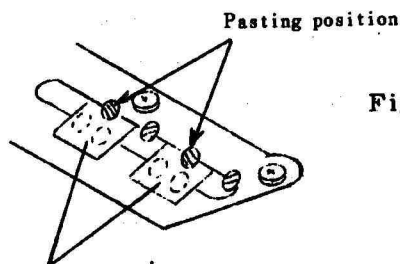


Fig. 91

Four soldered terminals shall be covered.

7. Clean the Contact of the Drive Mode

Contact Plate Ass'y (1AAAA970)
and the pattern of the Drive FPC
with ether-alcohol, and install
the Drive Mode Contact Plate
Ass'y.

8. Install the Drive Mode Lock
(1AA26510) and secure it
with the Drive Mode Lock
Setscrew (61813026).

9. Install the Multi-Exp.
Return Spring (1AA27910)
and the Multi-Exp.
Return Gear Ass'y
(1AAAA980), and
secure it with the
Multi-Exp. Return
Gear Serscrew
(66001068).

10. Install the Drive Mode Operation Plate
Ass'y (1AAAA990), the Drive Mode Dial
Spring (1AA27020), Drive Mode Spring
Pressure (1AA27100) and the Washer
(60321810), and secure them with the
Drive Mode Operation Plate Setscrew
(61913026).

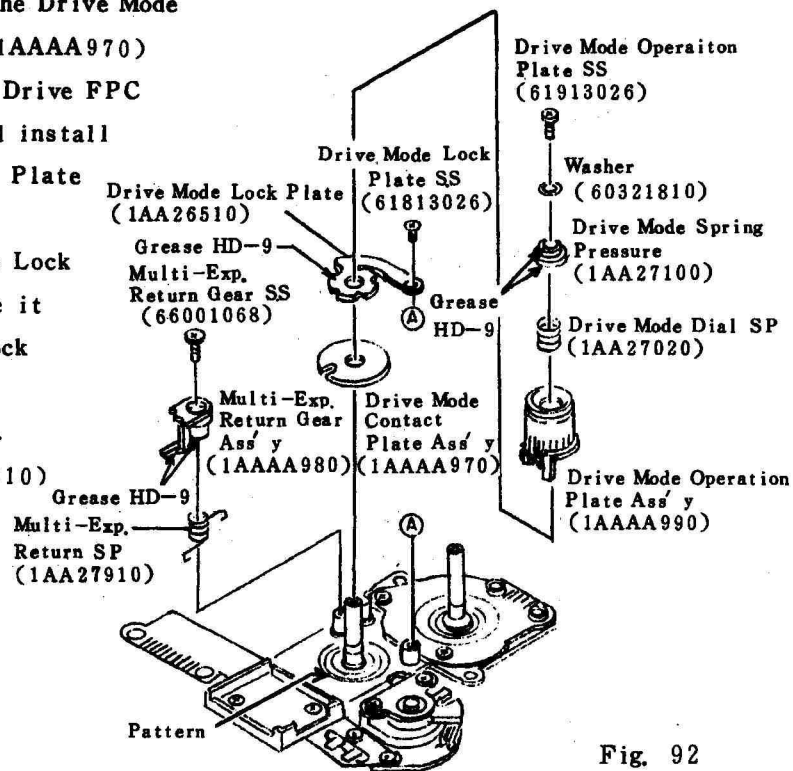


Fig. 92

Notes:

- Apply Loctite to the setscrews in the tip by 2 to 3 pitch.
- Hook up the Multi-Exp. Return Gear Spring as in Fig. 93 so that the Multi-Exp. Return Gear Ass'y operates smoothly.
- The Drive Mode Operation Ass'y shall turn smoothly and each lock shall click properly.

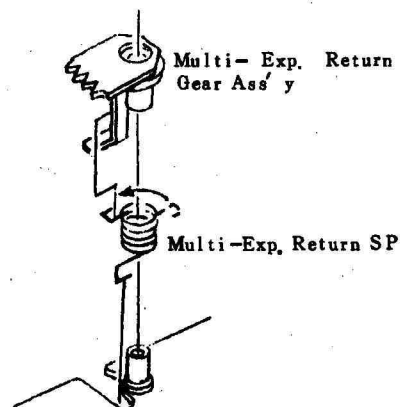


Fig. 93

11. After cleaning the connector surfaces of the Counter LCD Connector Rubber (1AA58800) and the Counter LCD Panel (1AA51100) with ether-alcohol, install the Counter LCD Connector Rubber and the Counter LCD Panel. Secure them with the Counter LCD Retainer.

Note : a) When mounting the Counter LCD Panel, Place it in the corners of the Counter LCD Holder (see the arrow marks in Fig. 95).

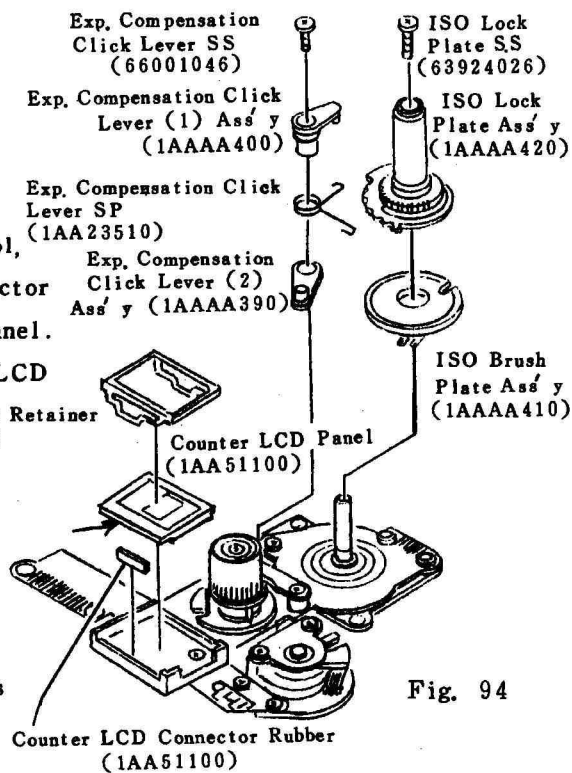


Fig. 94

12. After cleaning the contacts of the ISO Lock Plate Ass'y (1AAAA420) and the ISO Brush Plate Ass'y (1AAAA410) with ether-alcohol, install the ISO Lock Plate Ass'y and the ISO Brush Plate Ass'y. Then tighten the ISO Lock Plate Setscrew (63924026).
13. Install the Exp. Compensation Click Lever (2) Ass'y (1AAAA390), the Exp. Compensation Click Lever Spring (1AA23510) and the Exp. Compensation Click Lever (1) Ass'y (1AAAA400), and secure them with the Exp. Compensation Click Lever Setscrew (66001046).

Note : a) Apply Loctite to the setscrews in the tip by 2 to 3 pitch.

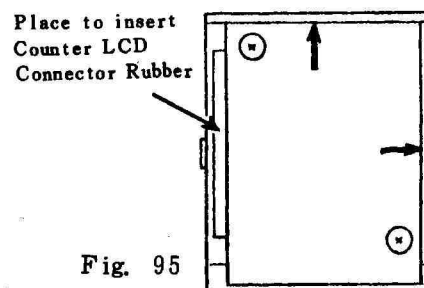
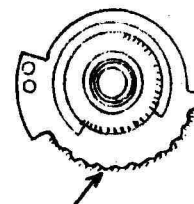


Fig. 95

Upper surface diagram for Counter LCD Holder



Position to apply Grease HD-9 (Upper surface diagram of ISO Lock Plate Ass'y)

Fig. 96

- b) With the ISO Lock Plate Ass'y, the normal / reverse rotation shall occur by a 2/3 clicl.
- c) The Exp. Compensation Click Lever Spring shall not be in contact with the Multi-Exp. Return Gear Ass'y. (See Fig 97)

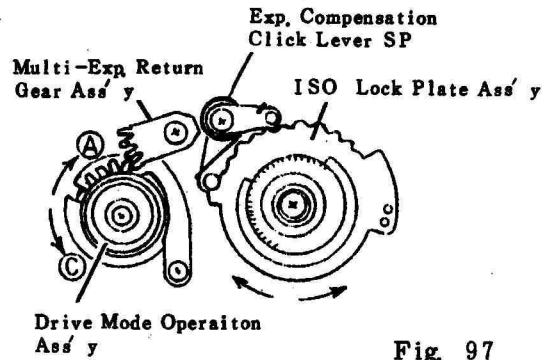


Fig. 97

C-1-7 Assembly of Multi-Exp. Lock Lever Ass'y

1. Install the Multi-Exp. Lock Lever Spring (1AA28410) and the Multi-Exp. Lock Lever Ass'y (1AAAA430) into the reverse side of the ISO Dial Base Plate and secure it with the E Ring (66101225).

[Confirmation of operation]

- a) The Multi-Exp. Lock Lever Ass'y shall operate smoothly.
 - b) When the Drive Mode Operation Ass'y is turned from the "single" to the "multi-exp." position (in the direction of A in Fig. 97), it shall lock without fail. When the Multi-Exp. Lock Lever Ass'y is turned in the direction of B in Fig. 99, the Drive Mode Operation Plate Ass'y shall restore to the "single" position and stop without fail.
- And when the Drive Mode Operation Plate Ass'y is turned from the "multi-exp." position in the direction of C in Fig. 97, it shall unlock after a slight click sound and restore to the "single" position.

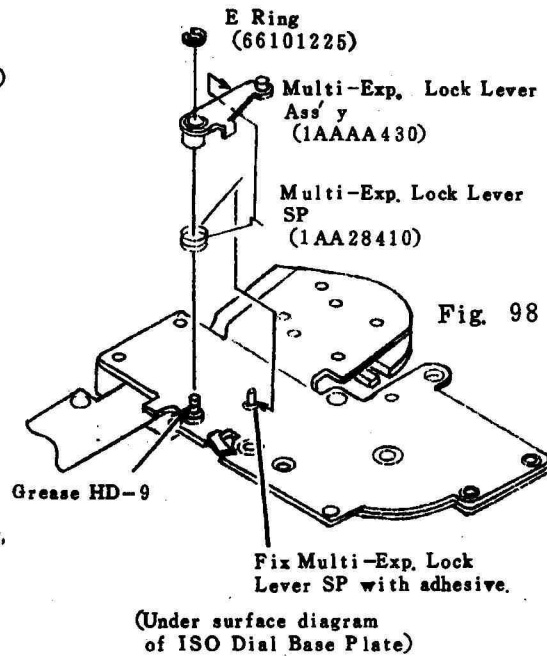
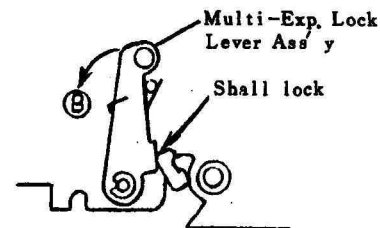


Fig. 98



(Position at Multi-Exp. Mode)

Fig. 99

C-1-6 Assembly of Back Cover Lock Cover

1. Push in the Spring Pin (1AA99700) to the Back Cover Lock Knob (1AA17100) and the Back Cover Lock Base (1AA17210).
2. Apply the Grease I-40 to the Back Cover Lock Knob Base and the Back Cover Lock Cover (1AA17000), and install the Back Cover Lock Knob Base.
3. Install the Back Cover Release Lever (1AA17310) and secure it with the Back Cover Release Lever Setscrew (1AA17510).
4. Install the Lock Plate Retaining Lever Spring (1AA17900) and the Lock Plate Retaining Lever (1AA17800).
5. Install the Lock Plate Spring (1AA17700) and the Back Cover Lock Plate Ass'y (1AAAA380).
6. Fix the tip (hook portion) of each spring with an cemedine 551A (four spots). (See Fig. 102)
7. Make sure that the Back Cover Plate operates smoothly without any stumble. Wipe the contact of the Back Cover Lock Plate with ether alcohol.

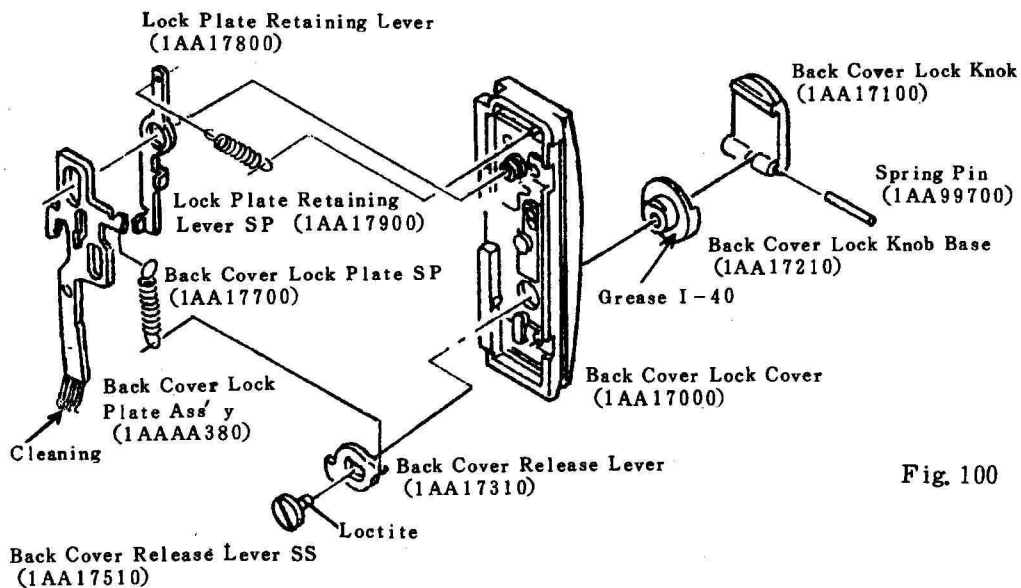
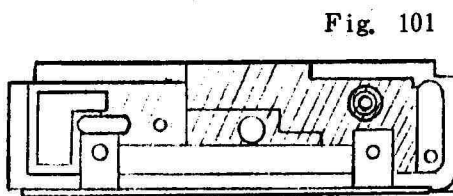
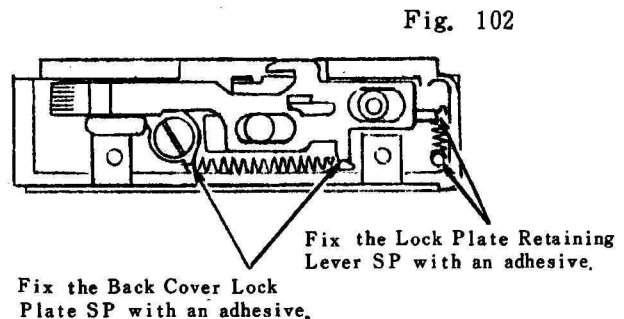


Fig. 100



Apply Grease I-40 in the shaded area in the Back Cover Lock Cover.

Fig. 101



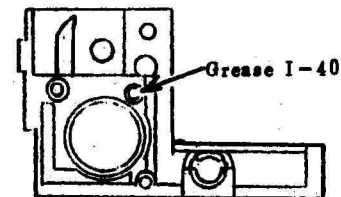
Fix the Back Cover Lock Plate SP with an adhesive.

Fix the Lock Plate Retaining Lever SP with an adhesive.

Fig. 102

C-1-7 Assembly of Vertical Release Base

1. Insert the Main Switch Button Spring (1AA24410) to the Vertical Release Knob (1AA39220), install the Vertical Release Button (1AA39000) and secure it with the E Ring.
2. Install the Vertical Release Knob to the Vertical Release Base (1AA39530). Apply the Grease I-40 to the reverse side of the Vertical Release Base and insert the Steel Ball (66701620).
3. Install the Vertical Release Holder Plate (1AA39310) and the Vertical Release Click (1AA39420) to the Vertical Release Knob Ass'y that is just fit in the Vertical Release Base, and secure it with the Vertical Release Click Setscrew (69113076)×3.
4. Wipe the Vertical Release Click contact and the Release P.C. Board (2) (1AA56610) pattern with ether-alcohol. Place the Release P.C. Board (2) and the Vertical Release Switch Base Plate (1AA39610) from above on the Vertical Release Click, and secure it with the Vertical Release Switch Base Plate Setscrews (69113076)×2.



Reverse side of Vertical Release Base

Fig. 103

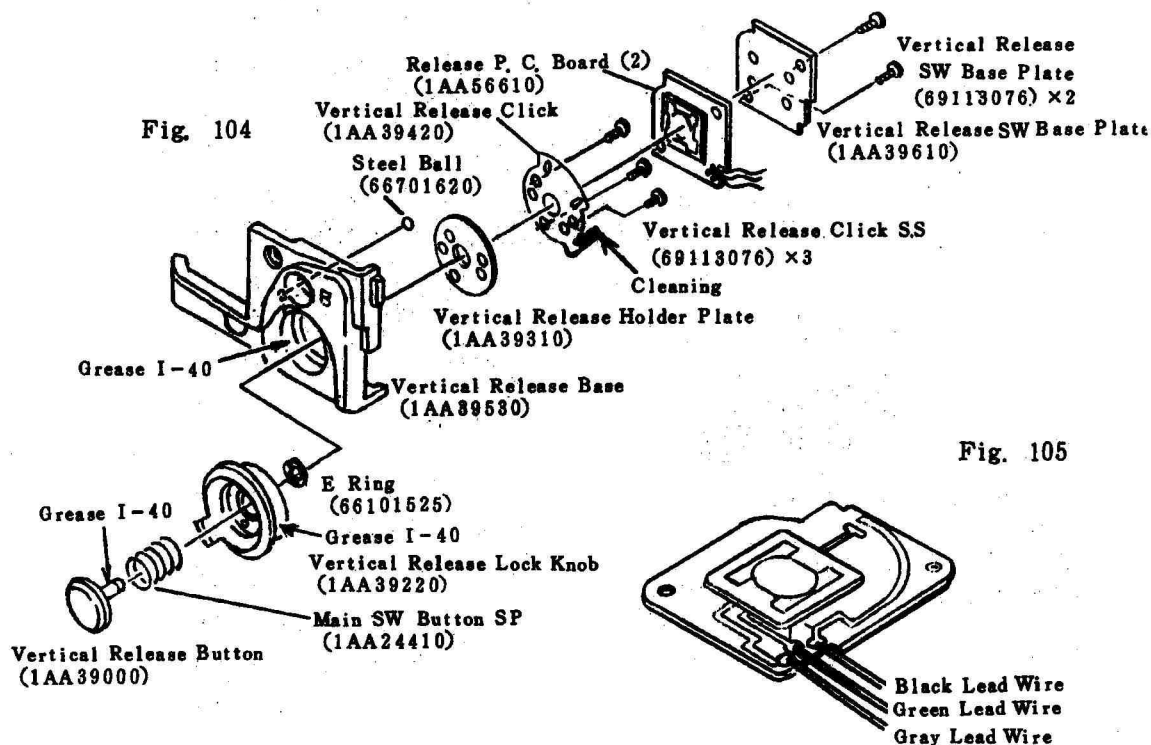
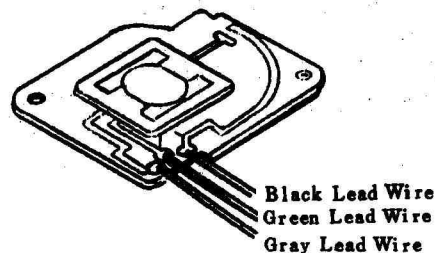


Fig. 105



(Wiring diagram of Release P.C. Board)

5. Apply Grease I-40 to the Vertical Release Base and the Rewind Knob (1AA29020), insert the Vertical Release Base and install the Rewind Knob Lock Spring (1AA29520) and Rewind Knob Lock Button.

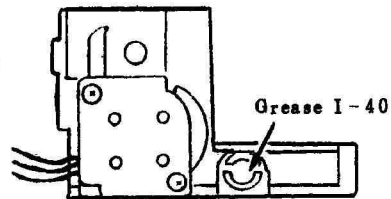


Fig. 106

6. Install the Rewind Knob Operation Plate (1AA29210) from the reverse side of the Vertical Release Base, and secure it with the Operation Plate Setscrew (61903026).
7. Install the Rewind Knob Spring (1AA29410) and the Rewind Knob Return Spring (1AA29320).

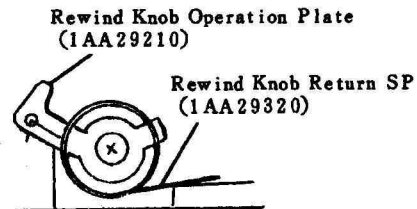


Fig. 107

- Check if the Rewind Knob operates smoothly.
8. Insert the Bulb Socket (1AA14500), attach the Washer (60223112) under the Vertical Release Base, tighten the First Curtain Brake Nut (13740700) and fix it with an adhesive (cemedine 551A).

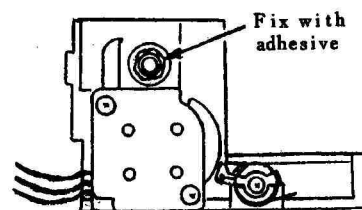


Fig. 108

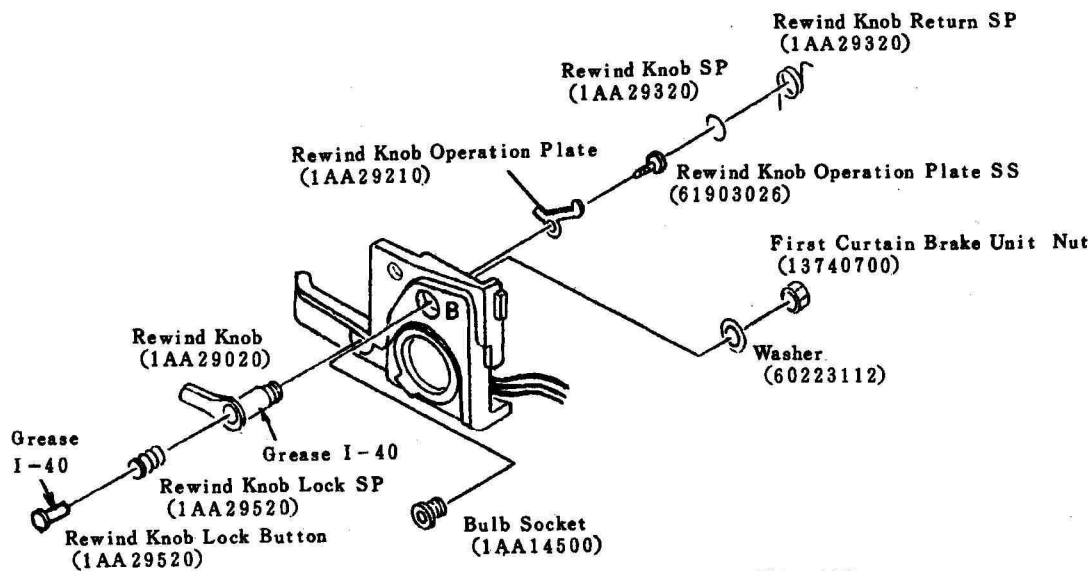


Fig. 109

C-1-8 Assembly of Penta Prism

1. Turn the Penta Prism (1AA80800) upside down, and place the Penta Prism Spacer (1AA80500) on the Penta Prism.
2. Install in the order of the Condenser Lens (1AA80500), the Viewfinder Frame (A) (1AA80400) and the Penta Prism Holder Ass'y (1AAAB740) onto the Penta Prism Spacer.
3. Raise the Penta Prism Holder Ass'y and remove the Penta Prism.

Notes:

- a) The Condenser Lens shall be free from dirt and dust.
 - b) The Viewfinder Frame (A) shall be housed in position in the Penta Prism Spacer.
 - c) Make sure the square holes in the Penta Prism Holder Ass'y are in corresponding positions with those in the Viewfinder Frame (A).
4. Bond the Penta Prism Spacer to the Penta Prism Holder Ass'y with epoxy resin adhesive.

Note : a) When applying the epoxy resin adhesive, make sure that the condenser Lens is not covered with the adhesive. Do not use an exceeding amount of adhesives.

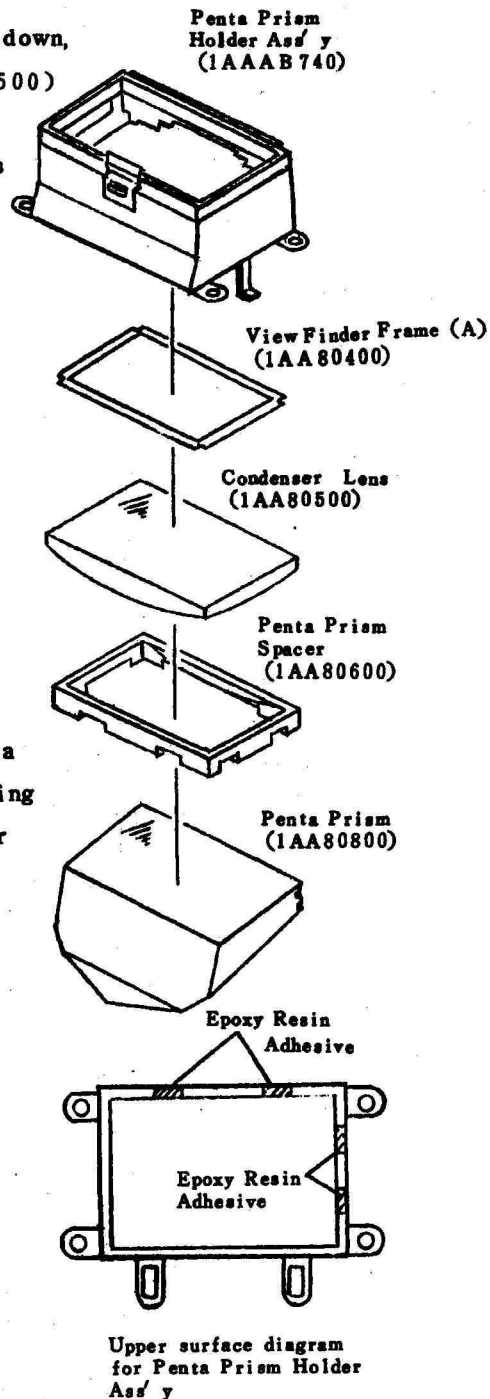
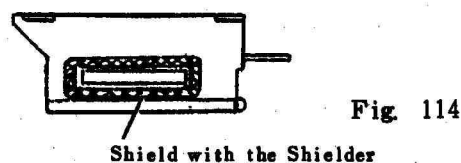
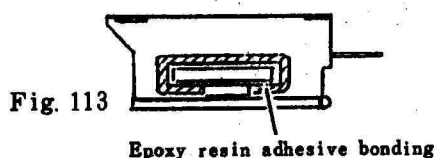
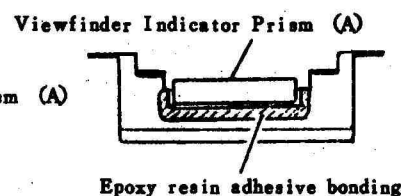
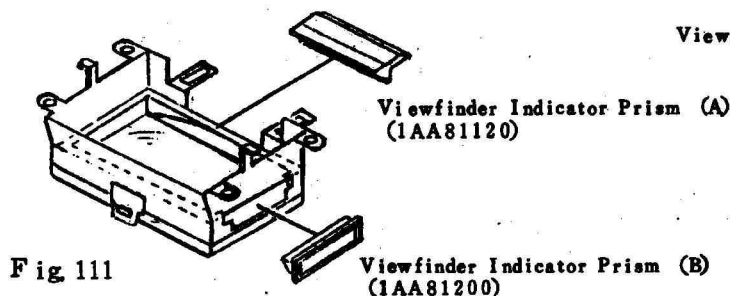


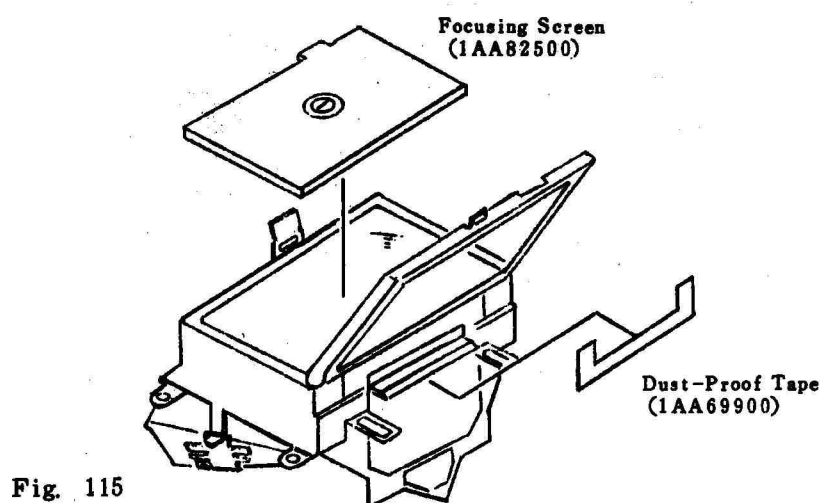
Fig. 110

5. Install the Viewfinder Indicator Prism (A) (1AA81120) to the Penta Prism Holder and glue it with epoxy resin adhesive. (See Fig. 112)
 6. Install the Viewfinder Indicator Prism (B) (1AA81200) to the Penta Prism Holder and glue it with epoxy resin adhesive. (See Fig. 113)
- Apply the Shielder around the Viewfinder Indicator Prism (B).
(See Fig. 114)

Note : a) After gluing with epoxy resin adhesive, leave it for 24 hours and install it to the body.



7. Follow in the reverse order of the procedure B-23.
8. After cleaning the Penta Prism Ass'y and the Focusing Screen, insert the Focusing Screen.
9. Stick the Dust-Proof Tape (1AA69900).
10. Apply the Shielder in a gap between the Penta Prism Holder and the Penta Prism.



C-1-9 Assembly of Viewfinder Indicator (B)

1. Fix the Inner EL Adhesive Tape (1AA81500) to the Viewfinder Indicator Holder (B) (1AA81700).
2. Peel off the backing paper of the Inner EL Adhesive Tape, slide the S-EL (1AA50800) in the direction of the arrow and fix it.
3. Fix the Inner LCD Adhesive Tape (1AA81600) onto the S-EL.
4. Peel off the backing paper of the Inner LCD Adhesive Tape and the protection tape of the S-LCD Panel (1AA50700), slide it in the direction of the arrow and fix it on the Inner LCD Adhesive Tape.

Notes:

- a) After Peeling off the protection tape of the S-LCD Panel, do not touch it with fingers.
 - b) Pay attention to the S-LCD Panel whether it is on the surface or the reverse side.
5. Peel off the protection tape on the surface of the S-LCD Panel and install the Viewfinder Indicator Holder (B) (1AA81800).
 6. Tighten lightly the Viewfinder Indicator Adjustment Screws (1AA82000)×2 into the Viewfinder Indicator Base (1AA81900). And secure them until the gap is about 1 mm. (See Fig. 119 ①)

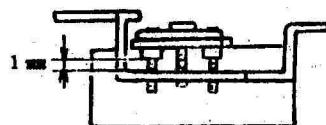


Fig. 119 ①

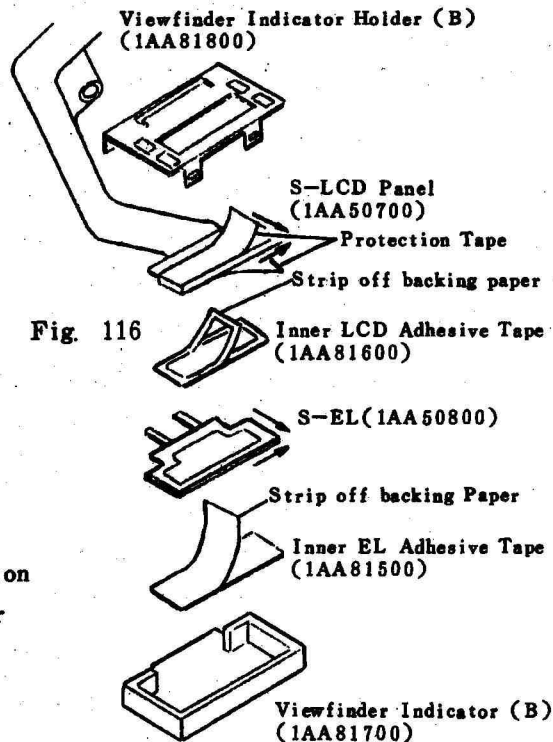


Fig. 116

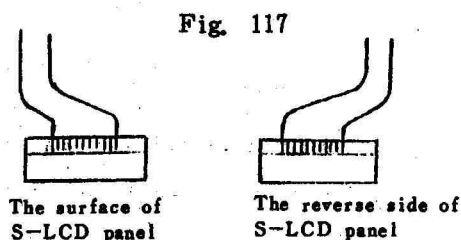


Fig. 117

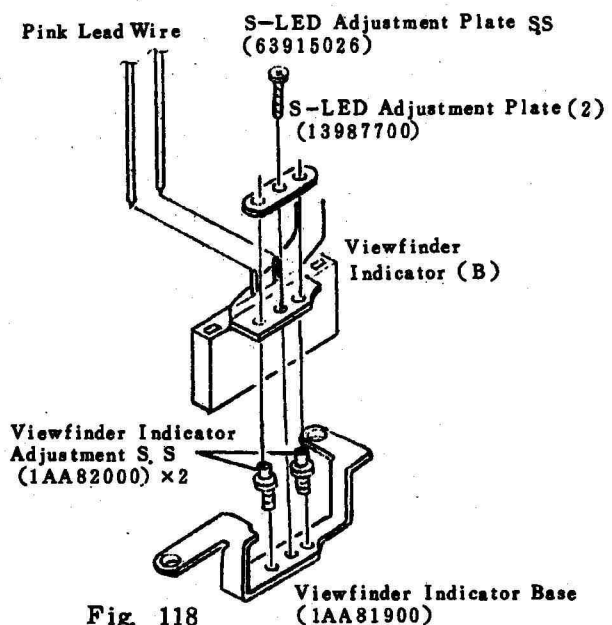


Fig. 118

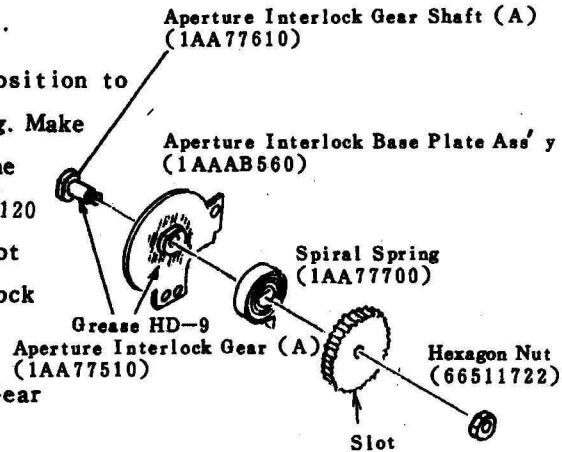
7. Install the Viewfinder Indicator (B) to the Viewfinder Indicator Base, place the S-LED Adjustment Plate (2) (13987700) on it and secure it with the S-LED Adjustment Plate Setscrew.
8. Solder the two Pink Lead Wires to the S-EL.

C-1-10 Assembly of Aperture Code Ass'y

1. Apply the Grease HD-9 to the Aperture Interlock Base Plate Ass'y (1AAAB560), and install the Spiral Spring (1AA77700) and the Aperture Interlock Gear (A) (1AA77510).

Fig. 119 ②

Note : a) Pay attention to the position to mount the Spiral Spring. Make sure that the tip of the Spiral Spring in Fig. 120 is engaged with the slot of the Aperture Interlock Gear (A).



2. Install the Aperture Interlock Gear Shaft (A) (1AA77610) to the Aperture Interlock Base Plate Ass'y and secure it with the Hexagon Nut (66511722).
3. Install the Aperture P.C Board (1AA56900) and the Aperture Interlock Base Ass'y (1AAAB570) to the Aperture Interlock Base Plate Ass'y and secure it with the Aperture Interlock Base Setscrew (66001050).

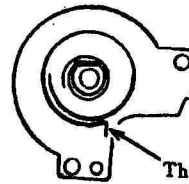


Fig. 120

The tip of this shall engage with the slot of Aperture Interlock Gear A.

Notes:

- a) Clean the Aperture P.C Board pattern and the contact of the Aperture Interlock Base Ass'y with ether-alcohol.
- b) Do not deform the contact of the Aperture Interlock Base Ass'y.

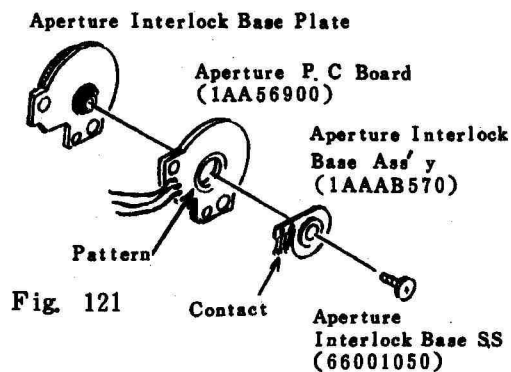


Fig. 121

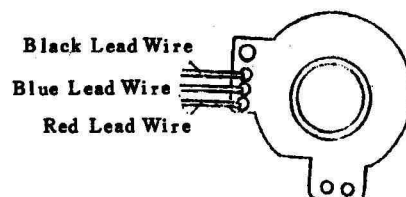
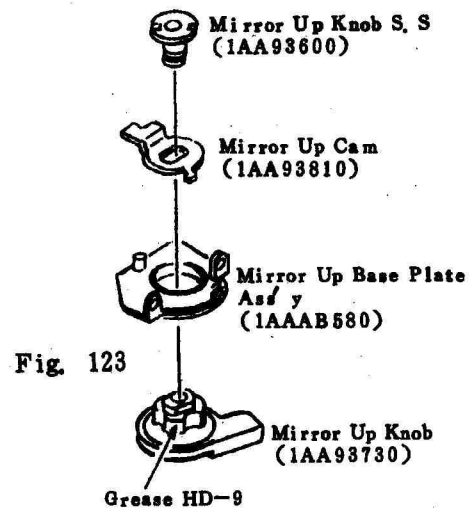
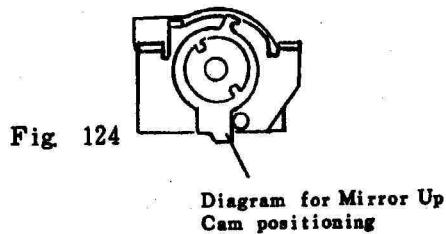


Fig. 122

(Aperture P.C Board diagram)

C-1-11 Assembly of Mirror Up Ass'y

1. Apply the Grease HD-9 to the Mirror Up Knob (1AA937300), install it to the Mirror Up Base Plate Ass'y (1AAAB580), Place the Mirror Up Cam (1AA93810) and secure it with the Mirror Up Knob Setscrew (1AA93810).



2. Insert the Lens Lock Button Spring (1AA94000) to the Lens Lock Button (1AA93900), install it to the Mirror Up Base Plate Ass'y and secure it with the E Ring (66101225).
3. Hook up the Mirror Up Click Spring (1AA93510) with the Mirror Up Base Plate Ass'y and the Mirror Up Cam, and fix the two connecting points with an adhesive (cemedine 551A).

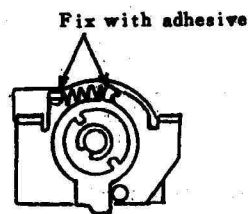


Fig. 126

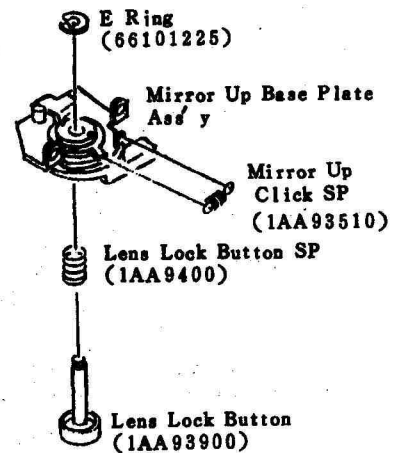


Fig. 125

C-1-12 Assembly of Metering Change Base Plate Ass'y

1. Apply the Grease HD-9 to the Metering Change Knob (1AA92320) and the Metering Change Base Plate Ass'y (1AAAB590), and install the Metering Change Knob to the Metering Change Base Plate Ass'y.
2. Place the Steel Ball on the Metering Change Base Plate Ass'y, put over it the Metering Change Plate Sub Ass'y (1AAAB600) and secure it with the Mirror Up Knob Setscrew (1AA93600).
3. Insert the Lens Lock Spring (1AA94010) to the Lens Lock Button (1AA93900), install it to the Metering Change Base Plate Ass'y and secure it with the E Ring (66101225).

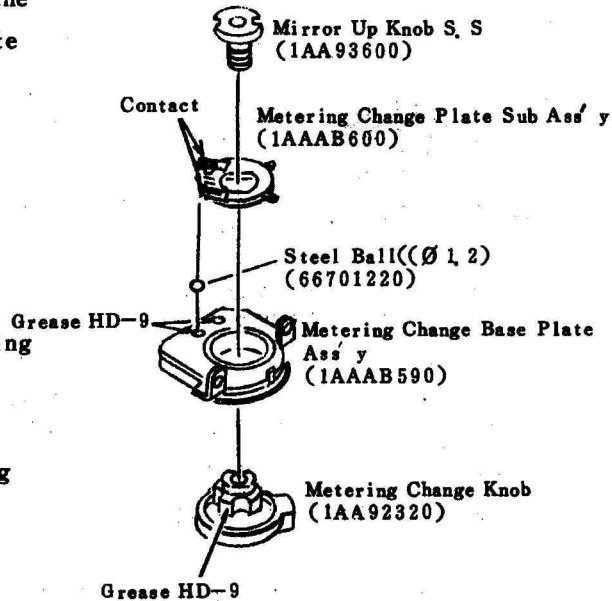


Fig. 127

Notes:

- a) Do not deform the contract of the Metering Change Plate Sub Ass'y. When the contact pressure is weak, a continuity malfunction may occur. If so, modify it by bending as in Fig. 129.

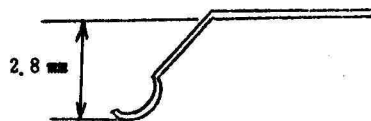


Fig. 129

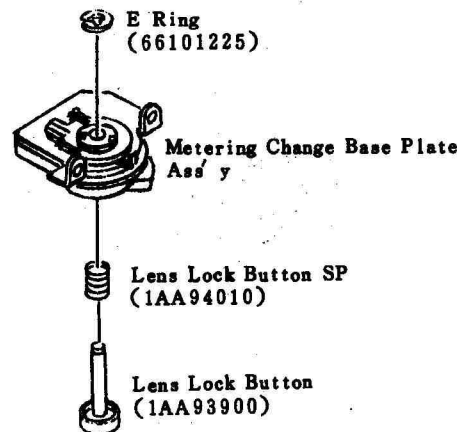


Fig. 128

- b) Make sure that you feel the clicks when the Metering Change Knob is operated. If there is no click, correct it by pressing down the tip of the Metering Change Click Plate with tweezers.

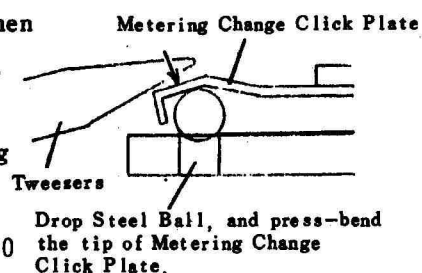


Fig. 130

C-1-13 Assembly of Metering Change FPC Ass'y

Fig. 131

1. Fix the Metering FPC Adhesive Tape to the Metering Change FPC Plate (1AA93000), peel off the backing paper of the Metering FPC Adhesive Tape and paste it to the Metering Change FPC (1AA55400).

Note : a) Wipe the pattern of the Metering Change FPC (1AA55400) with ether-alcohol.

2. Install the Preview Switch (1AA92900) to the Metering Change FPC Plate and secure it with the Preview Switch Setscrew (61911826).

Note :

- a) Wipe the Preview Switch (1AA92900) with ether-alcohol.
- b) Install the Preview Switch in parallel with the Metering Change FPC.

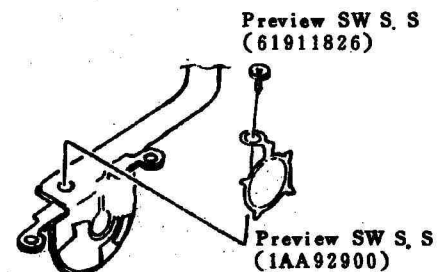
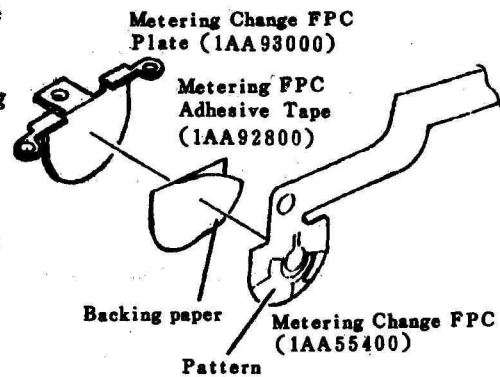


Fig. 132

C-1-14 How to fix moquette used to prevent light leakage in Spot Metering Ass'y

After repairing the Spot Metering Ass'y by replacing it a new, fix the M. Moquettes (1AA67810)×2 and the Mirror Light-Proof Moquette (1AA67700).

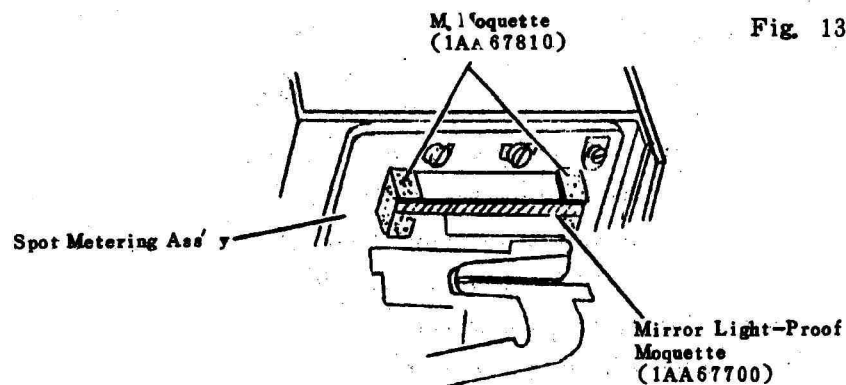


Fig. 133

(Spot Metering portion in Mirror Box)

C-1-15 Assembly of Mount Base Ass'y

1. Insert ① of the open signal FPC from the side ④ in the Mount Base and install the Aperture Ring of the Aperture Ring Plate Ass'y (1AAAB370) in the direction indicated by the arrow ② (open direction).
2. Tighten the Aperture Ring Plate Ass'y Setscrews (61912522)×6.
(See Fig. 134)

Notes : a) Move to the left (in the direction of the arrow ③) and install the Aperture Ring Plate Ass'y, and tighten the Aperture Ring Plate Ass'y Setscrews in the order of ① through ⑥. (See Fig. 134)

b) Check to make sure that all the rings of the Aperture Ring Plate Ass'y move evenly and smoothly.

c) Take care not to scratch the ④ part of the Mount Base.
(See Fig. 134)

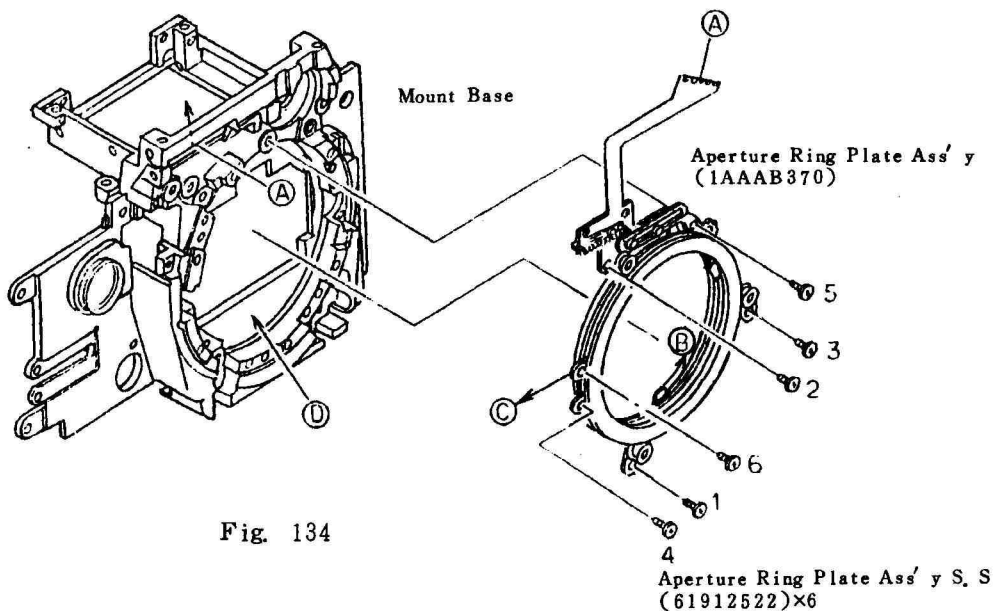


Fig. 134

3. Set the Aperture Interlock Ring in the direction indicated by the arrow ① (open direction). (See Fig. 136)
4. Rotate both the Aperture Interlock Gear (A) of the Aperture Code Ass'y (1AAAB360) and the claw ② to be engaged with the Spiral Spring for approximately 300 degrees, install it to the Mount Base and secure it with the Aperture Code Ass'y Setscrews (61913026)×2. (See Fig. 135)
5. Set the contact of the Aperture Interlock Contact Base in the Aperture Code Ass'y onto the second contact of the pattern in the Aperture Code, and tighten Aperture Code Ass'y Setscrew (66001050). (See Fig. 137)

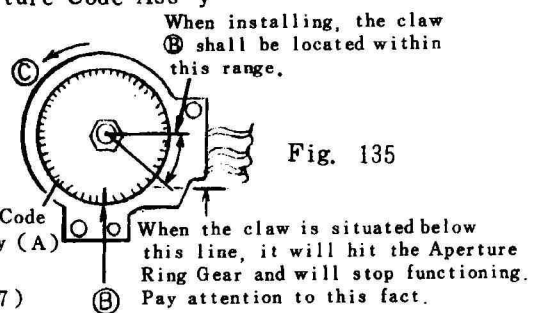
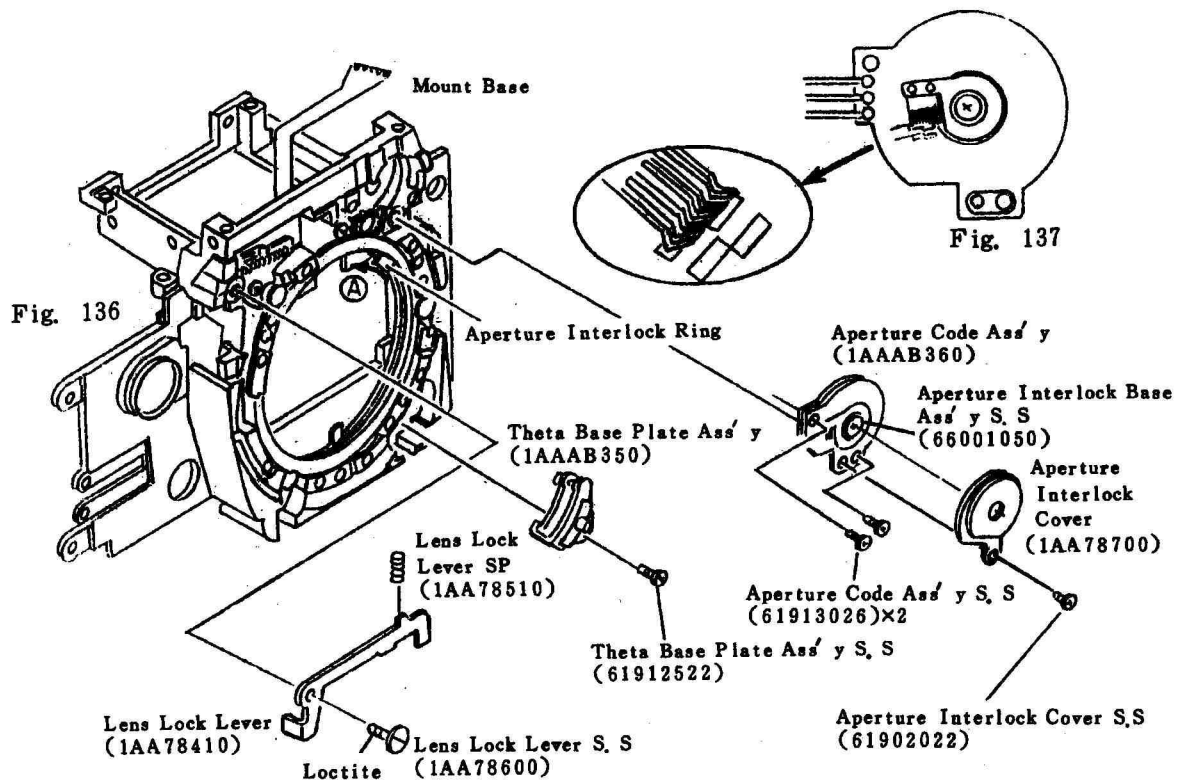


Fig. 135



6. Install the Theta Base Plate Ass'y (1AAAB350) and secure it with the Theta Base Plate Ass'y Setscrew (61912522).
7. Install the Lens Lock Lever (1AA78410) and secure it with the Lens Lock Lever Setscrew (1AA78600). Set the Lens Lock Lever Spring (1AA78510).

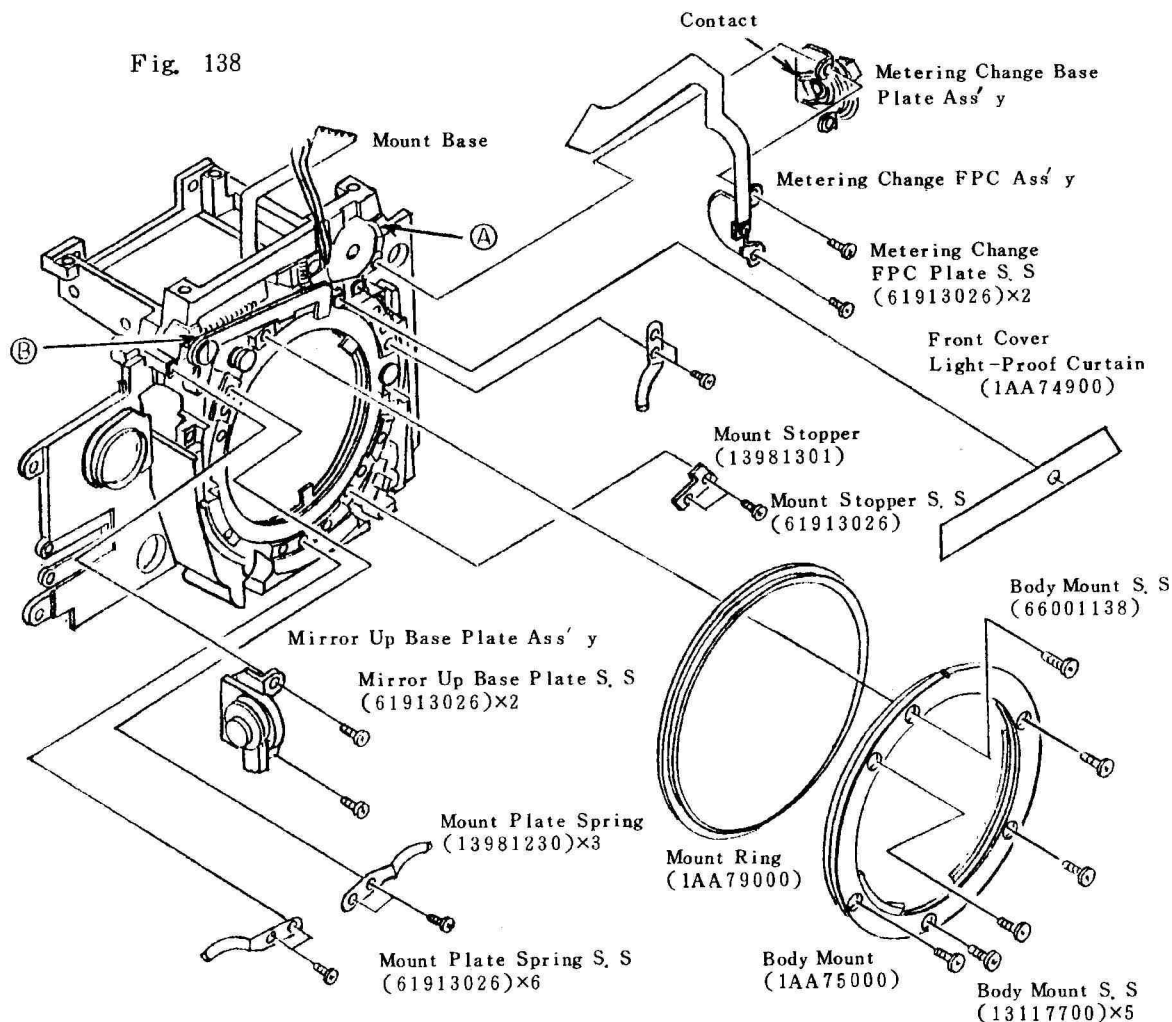
Note : a) Apply Loctite on about 1.5 pitches of thread of the Lens Lock Lever Setscrew. Pay attention to the amount of Loctite so that Loctite used does not overflow.

8. Install the Mirror Up Base Plate Ass'y and secure it with the Mirror Up Base Plate Setscrew (61913026) x2. (See Fig. 138)
9. Install the Metering Change Base Plate Ass'y and the Metering Change FPC Ass'y, and secure them with the Metering Change FPC Plate Setscrews (61913026) x2.

Notes:

- a) When installing the Metering Change FPC Ass'y, do not deform the contact of the Metering Change Base Plate Ass'y.
- b) Make sure that the Lens Lock Lever operates properly when the Lens Lock Button is depressed.

Fig. 138



9. Install the Mount Stopper (13981201) to the Mount Base and secure it with the Mount Stopper Setscrews (61913026).
10. Install the Mount Plate Springs (13981230) x 3 and tighten the Mount Plate Spring Setscrews (61913026).
11. Install the Mount Ring (1AA79000), place upon it the Body Mount (1AA75000) and secure it with the Body Mount Setscrews (13117700) x 5, (66001138).

Note : a) Make sure to install the correct side of the Mount Ring to the Body Mount.
(See Fig. 139)

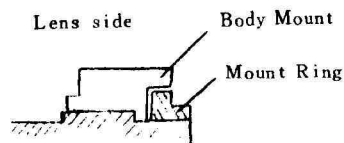


Fig. 139

12. Adjust the contact position the Open
F. Stop Signal Code Base Plate

[Adjustment procedure]

- ① Mount the Planar 1.4/50mm lens on the body mount.
- ② Set the lens aperture to F1.4.
- ③ Loosen the Open Signal FPC Setscrews (62901520)×2.
- ④ Move the Open F. Stop Signal FPC to adjust so that the Open F. Stop Signal Contact is positioned on the pattern of the Open F. Stop Signal FPC.
(See Fig. 140)
- ⑤ Tighten the Open F. Stop Signal FPC Setscrew.

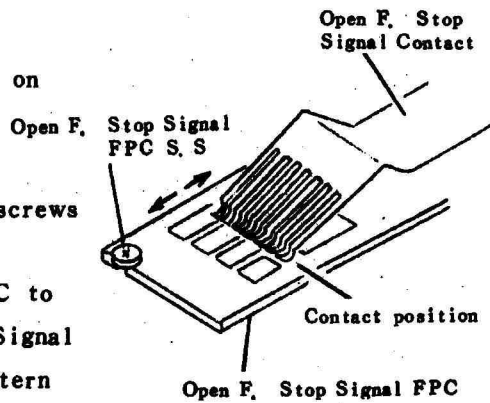


Fig. 140

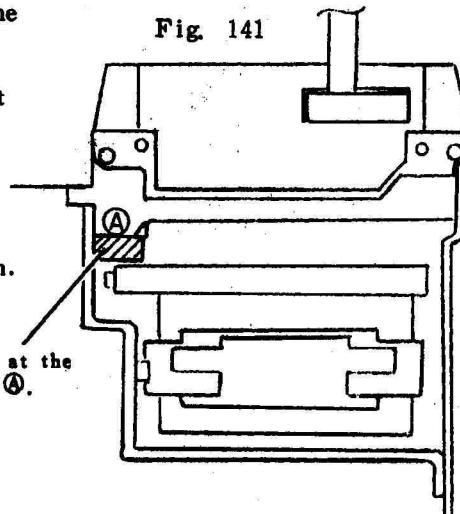
13. Apply an adhesive (Cemedine 551A) at ④ and ⑤ on the Mount Base and fix the Front Cover Light-Proof Curtain (1AA74900). (See Fig. 138)

Note : a) Use the Ø boss on the Mount Base as the guide.

[Position to paste Swing Arm Cushion]

Note : a) After repairing the Mount Base Ass'y and the Mirror Box Ass'y by replacing them, fix the Swing Arm Cushion on the reverse side of the Mount Base. Without the Swing Arm Cushion pasted, the Mirror sometimes won't stay in the "up" position.

Paste Swing Arm Cushion at the same height with surface ④.



(Reverse side of Mirror Box Ass'y)

C-1-16 How to hook Springs of Mirror Box Side

1. Install the 45° Adjustment Base Plate (B) Ass'y (1AAAB250) to the Mirror Box Base Plate.
2. Place the 45° Spring (A) (1AA63600) and hook its ① and ② part with ② and ① respectively.
3. Pass the Sub Mirror Spring (1AA61010) through the reverse side of the Swing Arm and put it in the gap of the Sub Mirror Snap Pin. Hook the ③ and ④ part of the Sub Mirror Spring with ③ and ④ respectively. Secure it with the Spring Setscrew (1AA63700).
4. Install the 45° Spring (B) and hook the ⑤ and ⑥ part of the 45° Spring with ⑤ and ⑥ respectively. Secure it with the Spring Setscrew (1AA63700).

Fig. 142

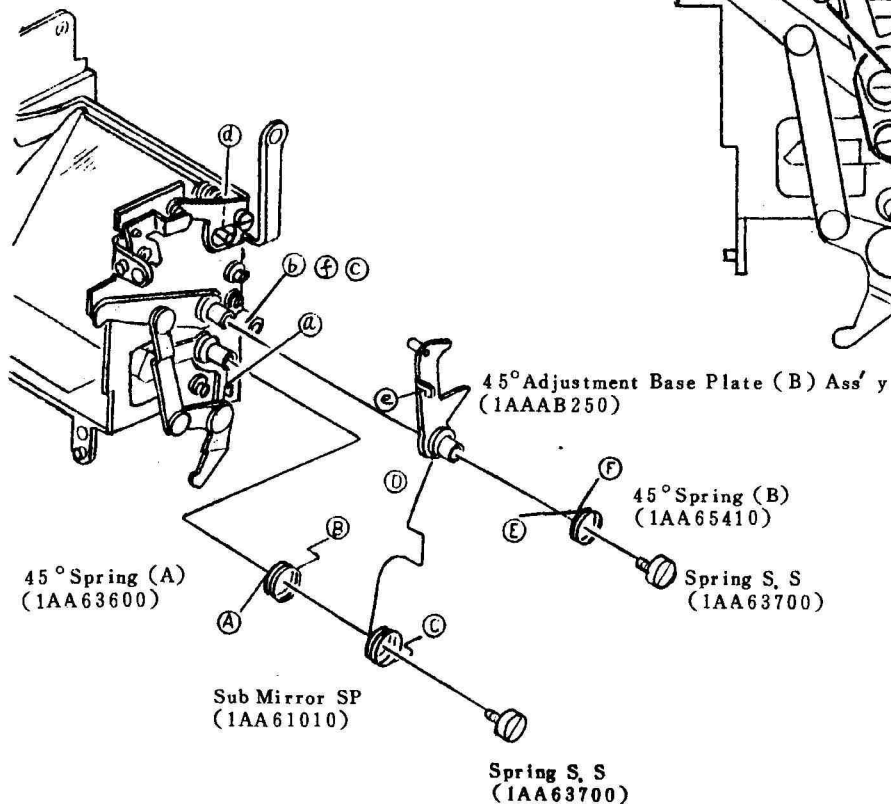
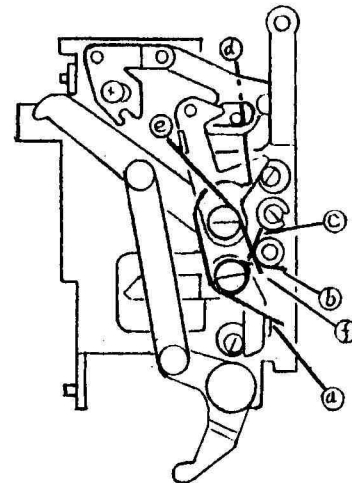


Fig. 143



C-1-17 Installation of Mirror Box Base Plate

1. Lift up the Aperture Lever (L) of the Mirror Box Base Plate in the direction indicated by the arrow ④.
2. Turn the Aperture Ring of the Mount Base Ass'y in the direction indicated by the arrow ⑤. While holding the Aperture Ring in the position, install the Mirror Box Base Plate Ass'y. Secure it with the Mirror Box Base Plate Setscrews (61923026)×3, (61922026)×2.
3. Install the FPC Protection Plate (1AA65900), insert the Washer (60122112) and secure it with the FPC Protection Plate setscrews (61923026 and 61912026).

Notes:

- a) Pay attention to the Light-Proof Curtain when installing the Mirror Box Base Plate Ass'y.
- b) Make sure that the Mirror Box Base Plate Ass'y is firmly fixed on the Mount Base Ass'y without any loosening.
- c) Make sure that the Aperture Ring is in the position indicated in Fig.145①. If it is in the position indicated by Fig. 146,① follow the above procedure from the beginning.

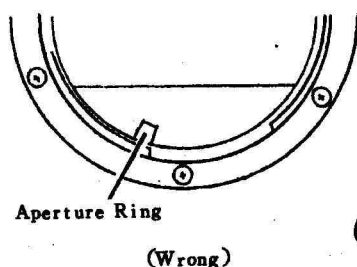
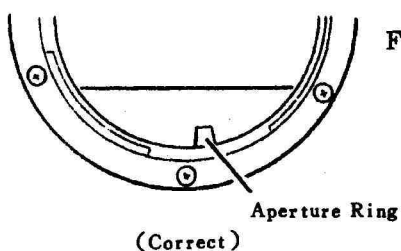


Fig. 146 ①

Fig. 145 ①

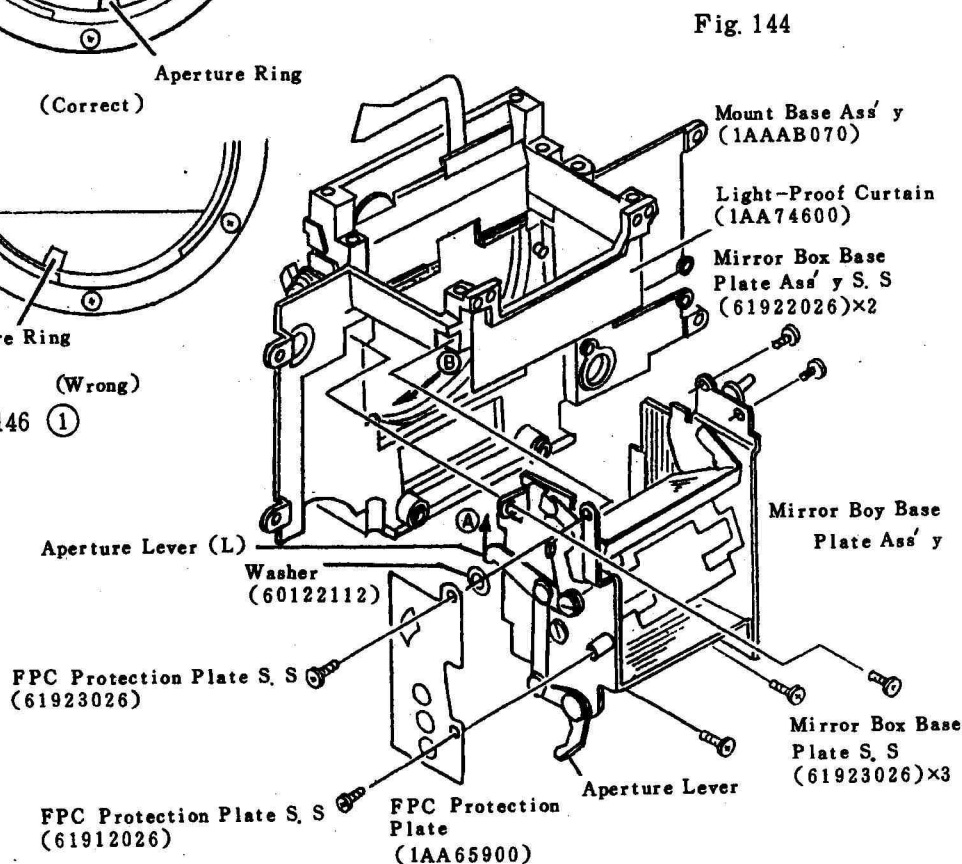


Fig. 144

[Timing adjustment of Mirror Up switching]

Move the Mirror Up Arm Ass'y in the direction indicated by the arrow to set it in the "up" position. Loosen the Mirror Up Switch Setscrew to adjust the Mirror Up Switch so that the distance between the mirror reflection plane and the Mirror Cushion is 1.0 to 0 mm.

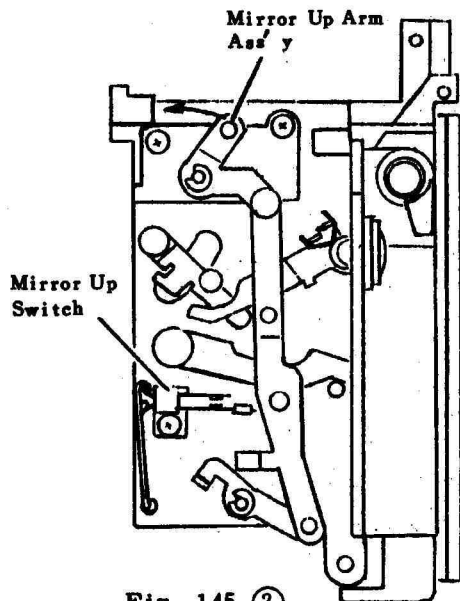


Fig. 145 ②

Fig. 146 ②

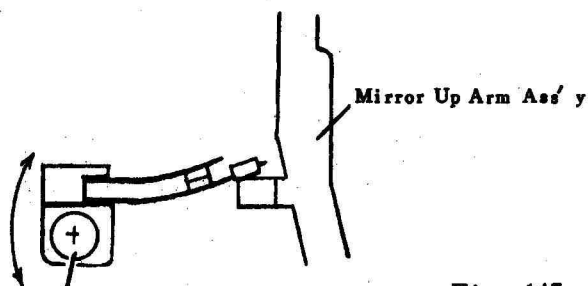
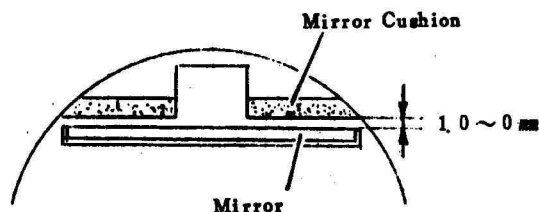


Fig. 147

Loosen Mirror Up Switch S. S.
Adjust by winging Mirror
Up Switch up and down.

[1 Confirmation of timing of Mirror Up Switch]

* After installing the Mirror Box Ass'y to the camera body and mount the QR Lever Ass'y, check the timing of the Mirror Up switching on.

1. Make sure that the Mirror Up Switch is ON with the Mirror in the "up" position when the Shutter Charge Cam Ass'y is turned clockwise.

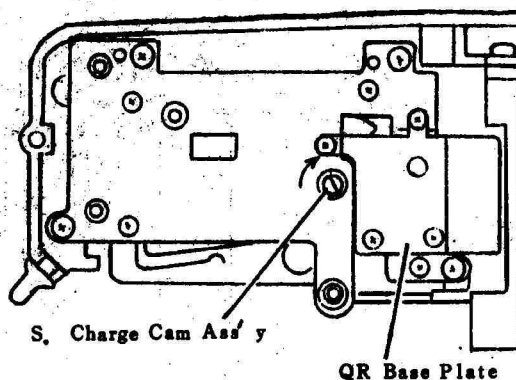


Fig. 148

[2 Reconfirmation of timing of Mirror Up Switch]

* After installing each parts(not necessarily for exterior parts) and soldering each lead wire, reconfirm the timing of the Mirror Up Switch.

1. Set the voltage regulator to 4.2 V.
2. Connect the terminals of (+) and (-) to the camera body.
3. Release the shutter.
4. Check if the Mirror stays in the "up" position. If it falls down without staying in the "up" position, the timing of the Mirror Up Switch is early. Readjust the Mirror Up Switch.

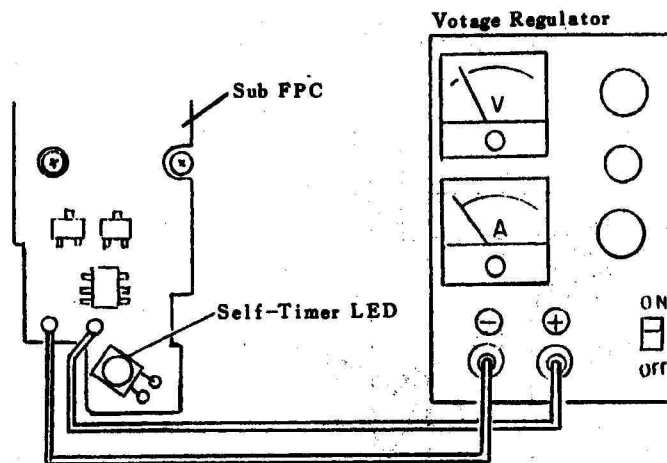


Fig. 149

[Adjustment of Mirror Box Ass'y] (See Fig. 150)

- o The screw ④ is for horizontal adjustment of the Mirror.
Never loosen the screw ④ otherwise the Mirror will be out of the horizontal.
- o The screw ⑤ is for vertical adjustment of the Mirror (for the fine adjustment of the Viewfinder focusing)
When a rough adjustment for the Viewfinder focusing is necessary (i.e. adjustment of 0.1mm or greater in the movement of lens 50/F1.4), it must be done by choosing and replacing the Washer located under the Penta Prism Holder. Since the vertical adjustment of the Mirror for adjustment of Viewfinder focusing may cause a parallax, pay attention to it.
When the Viewfinder focusing is adjusted by the screw ⑤, make sure to check also the Spot Metering position and parallax.
- o The screw ⑥ is for Sub Mirror position adjustment (Spot Metering position adjustment)
When an equipment for the spot Metering position adjustment is not available, do not use the screw ⑥ otherwise the correct Spot Metering position will deviate.

- o The screw ① is for Mirror 45° position adjustment.
Never use the screw ① where the special tools for the Mirror 45° position adjustment is not available for the ① sets standard in Spot Metering position, parallax and Viewfinder focusing.

Notes:

a) After the Mirror Box Ass'y is removed, check to adjust the following:

- ① Flange back adjustment
- ② Viewfinder focusing adjustment
- ③ Parallax adjustment

(Refer to C-47 for adjustment procedures)

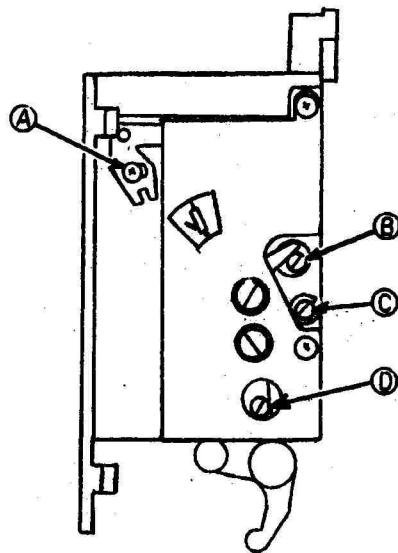


Fig. 150

C-1-18 Installation of Aperture Control Ass'y

1. Turn the FC Gear (2) in the direction indicated by the arrow **A** and disengage the FC Gear (2) when the FC Ratchet has made about one revolution. Make sure that the FC Ratchet turns smoothly (check it four or five times).

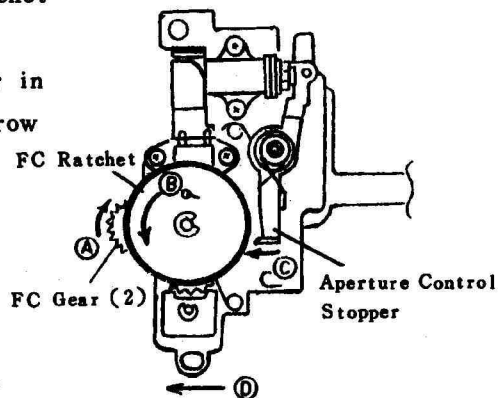
2. Turn the FC Ratchet for about 90° (1/4 rotation) in the direction indicated by the arrow **B** from the position that the Ratchet returned and stopped.

Move the Aperture Control Stopper in the direction indicated by the arrow **C** and lock the FC Ratchet.

3. With the Ratchet being locked, install it to the Mirror Box Ass'y and tighten lightly the Aperture Control Ass'y Setscrew on the top (61912526). Slide the Aperture Control Ass'y in the direction indicated by the arrow **D** and engage it firmly with the FC Gear (1) and the Aperture Ring Gear.

4. Tighten lightly the Aperture Control Ass'y Setscrews (61912526)×2 beneath.
5. Unlock the Aperture Control Stopper.
6. Rotate the Aperture Ring to check if the FC Ratchet and the Aperture Ring turn smoothly.
7. When they do not turn with ease due to the fact that they are engaged too deeply, loosen the two aperture Control Ass'y Setscrews beneath and adjust the gear connection between the FC Gear (1) and the Aperture Ring Gear (engagement: about 2/4).
8. After checking the gear engagement, tighten firmly the Aperture Control Ass'y Setscrews.

Fig. 151



Aperture Control Ass'y S, S
(61912526)×3

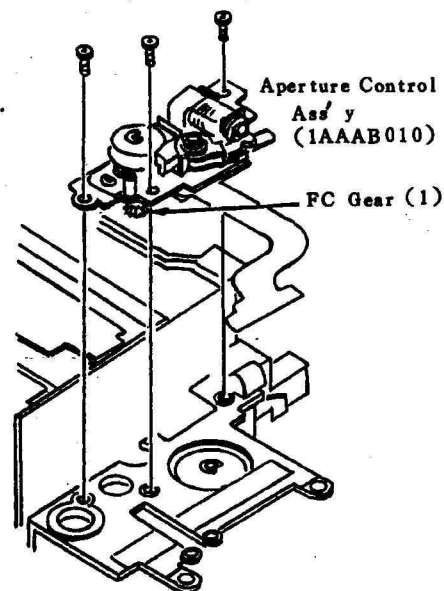


Fig. 152

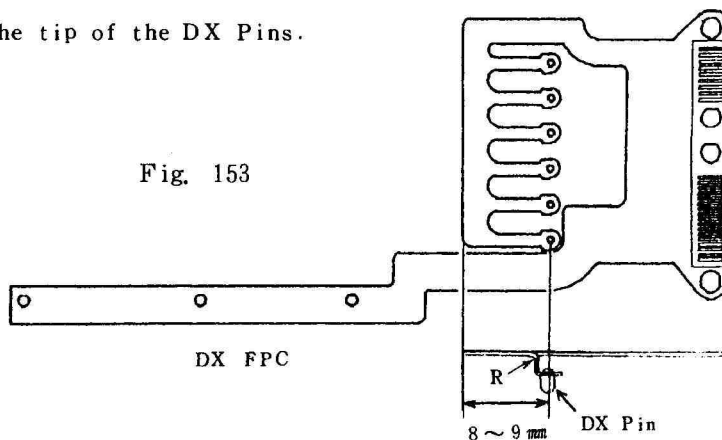
C-1-19 Forming of DX FPC

* Before installing the DX FPC, bend it as illustrated below.

1. Bend the DX FPC so that the center of the DX Pin is positioned 8 to 9 mm from the DX FPC corner.

Notes:

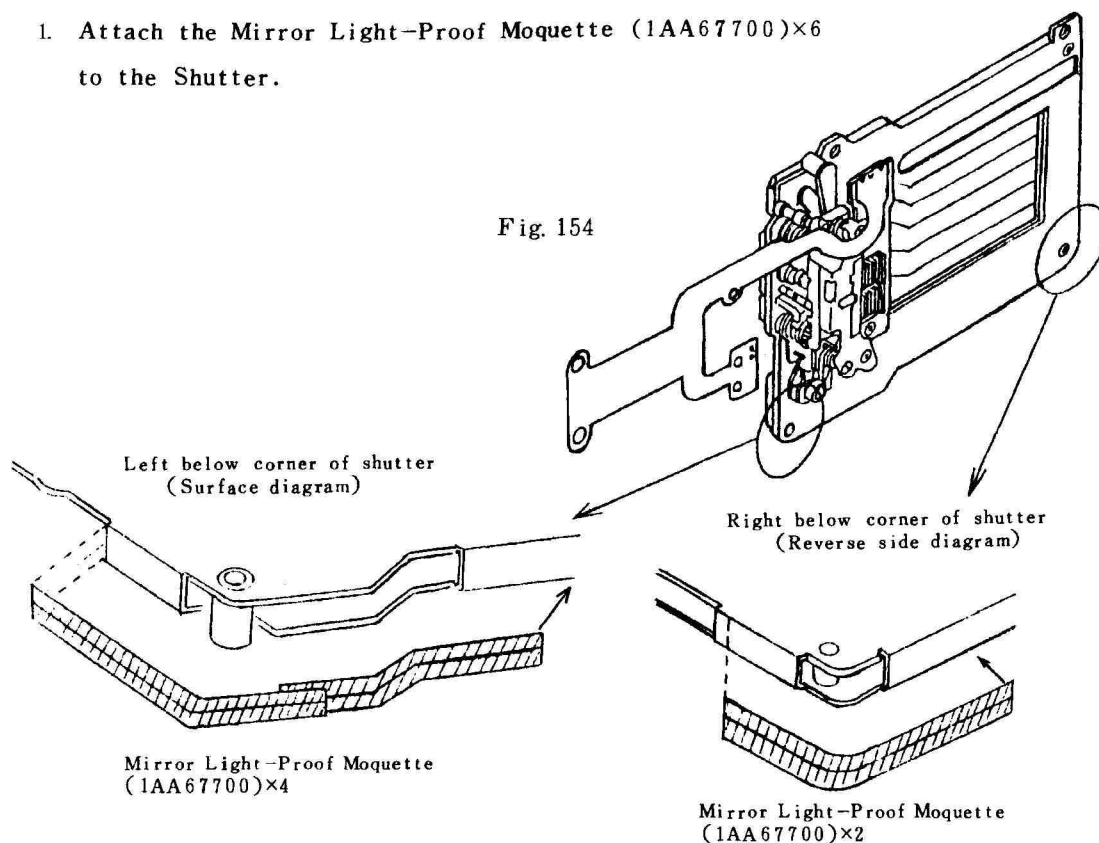
- a) Leave the radius in the bent portion.
- b) Do not soil the tip of the DX Pins.



C-1-20 Attaching Shutter Light-proof Moquette

* After replacing the Shutter, attach the Moquette in both lower corners of the Shutter.

1. Attach the Mirror Light-Proof Moquette (1AA67700)×6 to the Shutter.



C-2 Assembly and Adjustment of Parts in Camera Body

C-2-1 Sticking of Body Seal

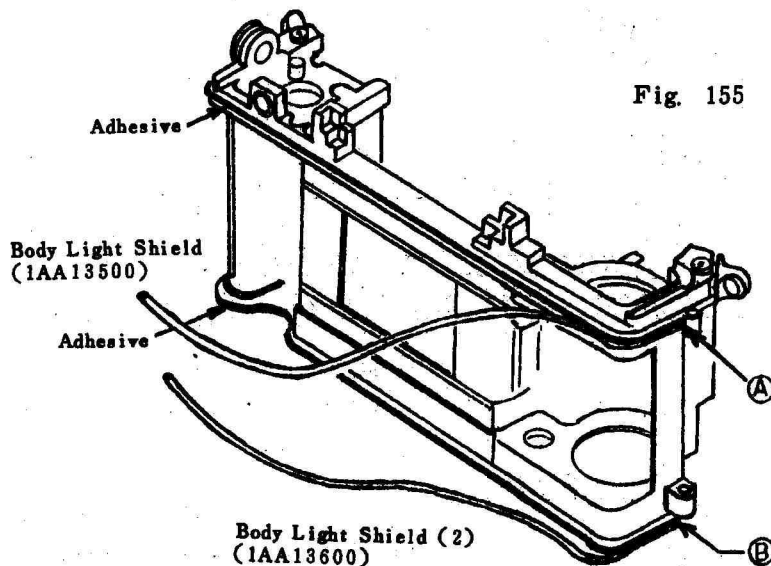
1. Apply Loctite prism primer and then Loctite 402 on portion **A** of the camera body, and stick the end of the Body Seal (1) (1AA13500).

Note : a) Be sure to stick the seal in correct position. Loctite 401 is a powerful adhesive, so that you can not retry the sticking.

2. Apply Loctite prism primer and then Loctite 401 all along the grooves in the camera-body.

Stick the Body Seal (1) from the end stuck previously.

3. Stick the Body Seal (2) (1AA13600) to portion **B** of the camera body, following the same procedure as 1 and 2 above.



Notes:

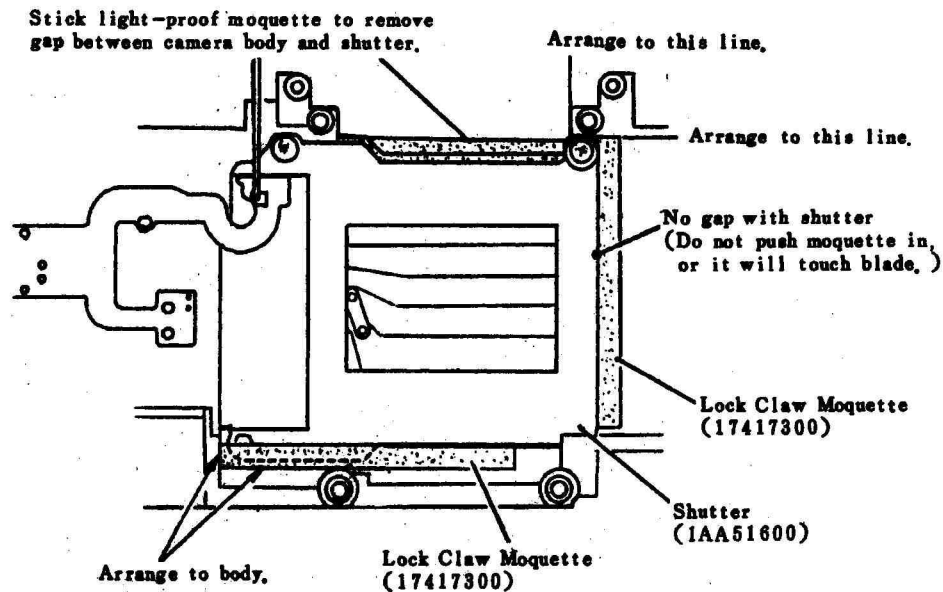
- a) Do not allow the adhesive to spill out of the grooves of the camera body.
- b) The gas from the adhesive can whiten the surrounding area of the camera body. Therefore, use 24 hours of open time after the seal sticking.
- c) If Loctite prism primer and Loctite 401 are not available, use an crazy glue or Super glue. In this case, drip the crazy glue or super glue a few drops at a time and proceed with the sticking quickly. Use 24 hours of open time after the seal sticking.

C-2-2 Sticking of Shutter Light-proof Moquette

* The light-proof moquette must be stuck on the camera body after installing the shutter.

1. Stick the Light-proof Moquette (1AA69800) on the upper part of the shutter and the camera body.
2. Stick a Lock Claw Moquette (17417300) on the right side of the shutter.
3. Stick a Lock Claw Moquette (17417300) on the lower side of the shutter.

Fig. 156



C-2-3 Hooking Up of Mech. Bulb Spring

1. Hook up the Mech. Bulb Spring (1AA98900) in the order of ① and ② :
 - ① Hook up the Mech. Bulb Spring to the Mech. Bulb Lever Ass'y (1AAAA210).
 - ② Hook up the Mech. Bulb Spring to the camera body.
2. When the Mech. Bulb Lever Ass'y is moved in the direction of the arrow, the Mech. Bulb Lever Ass'y must return by the force of the Mech. Bulb Spring.

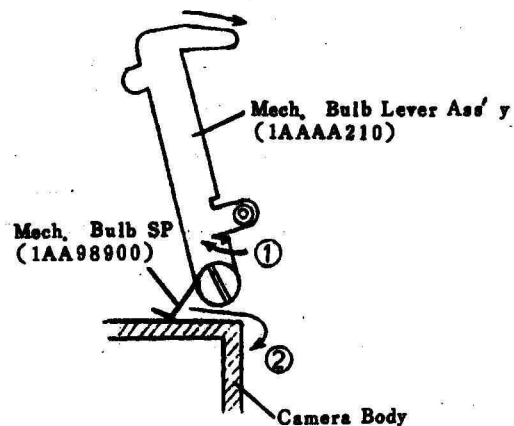
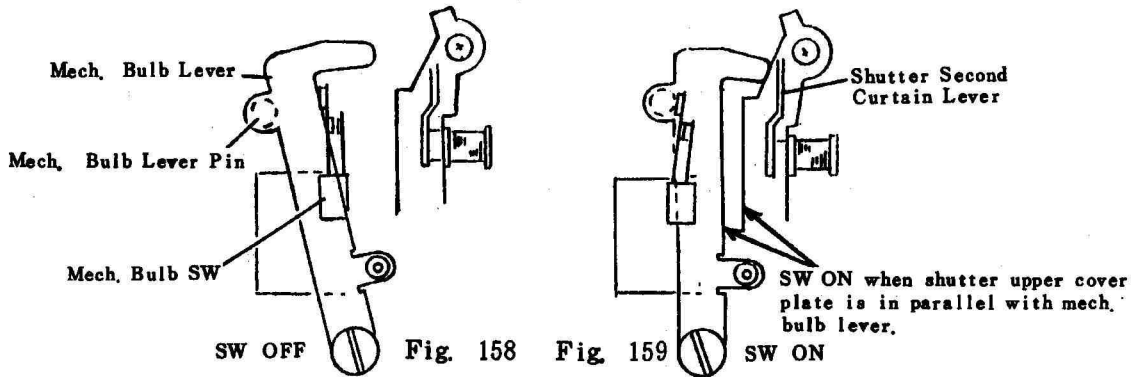


Fig. 157

[Adjustment of Mech. Bulb Switch]

- * After installing the Mech. Bulb Lever Ass'y on the camera body, the timing of mech. Bulb switch ON must be adjusted.



The switch must be OFF in the initial state. The switch must be ON when the Mech. Bulb Lever is in parallel with the Shutter Upper Cover Plate. The switch must be surely ON when it has come in contact with the Shutter Second Curtain Lever. (Fig. 159)

C-2-3 Installation of S. Charge Base Plate Ass'y

1. Set the Spool Holder (1AA14310).
2. Pass the lead wires of the Shutter Charge Motor down below the camera body, and install the S. Charge Base Plate Ass'y.
At this time, push the S. Charge Lever in the direction of the arrow, and set the S. Charge Base Plate Ass'y.
3. Tighten it up with S. Charge Base Plate Unit Setscrews (61923026)×3.

Note : a) When installing the S. Charge Base Plate Ass'y with the Spool and winding Unit Ass'y assembled, be sure to pass the lead wires through the holes of the Spool and Winding Unit Ass'y.
(See Fig. 161)

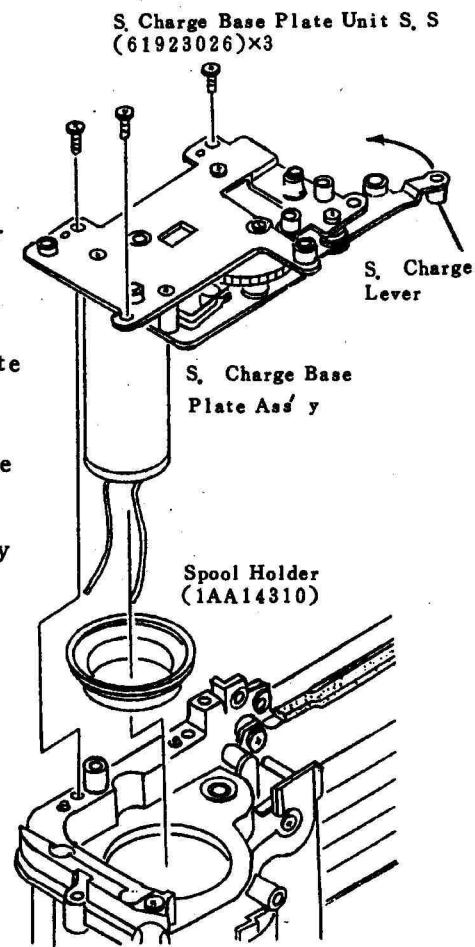


Fig. 160 ①

C-2-4 Installation of Winding Unit Ass'y

1. Set the Spool spring (1AA36310) in the Spool (1AA36200).
2. Pass the lead wires (red and black) of the Shutter charge Motor through the Spool, and set the Spool in the camera body.

Note : a) When setting the Spool with the Film Holding Unit installed, install the Spool in the body by moving the Film Holding Roller in the direction of the arrow.

Fig. 161

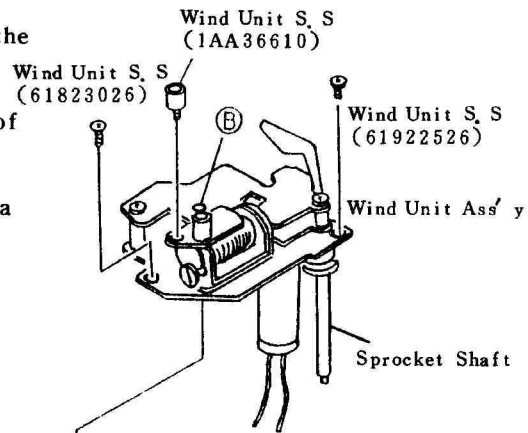
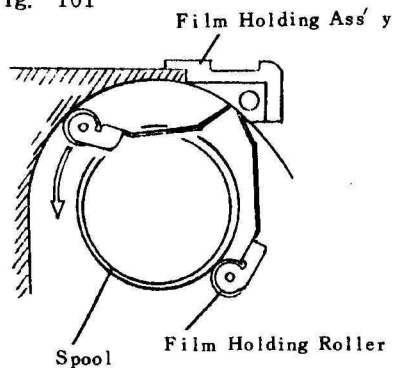
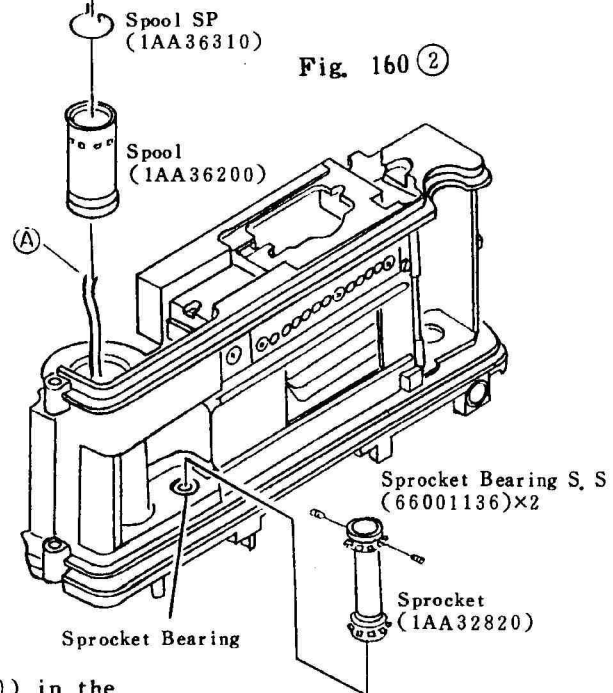


Fig. 160 ②



3. Fit the Sprocket Bearing (1AA32910) in the Sprocket (1AA32820), and fix it by tightening the Sprocket Bearing Setscrews (66001136)×2.

Note : a) Introduce the Sprocket Bearing, the thicker side below, in the Sprocket.

4. Install the Sprocket in the camera body, with the bearing side below.

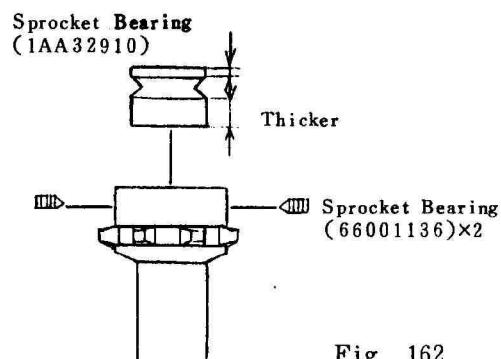


Fig. 162

5. Pass the lead wires (red and black) ④ of the Shutter Charge Motor through hole ⑤ of the Winding Unit Ass'y, and install the Winding Unit Ass'y in such a way that the Sprocket Shaft enters the Sprocket. (See Fig. 160) At this time, fit the end of the Spool Spring in the groove of the Winding Gear (10) and install the Winding Unit Ass'y. (See Fig. 163)
6. Tighten the Winding Unit Setscrews (61823026), (61922526), (1AA36600).

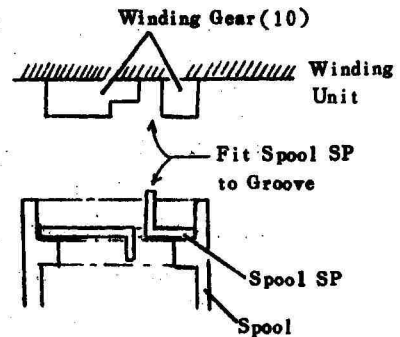


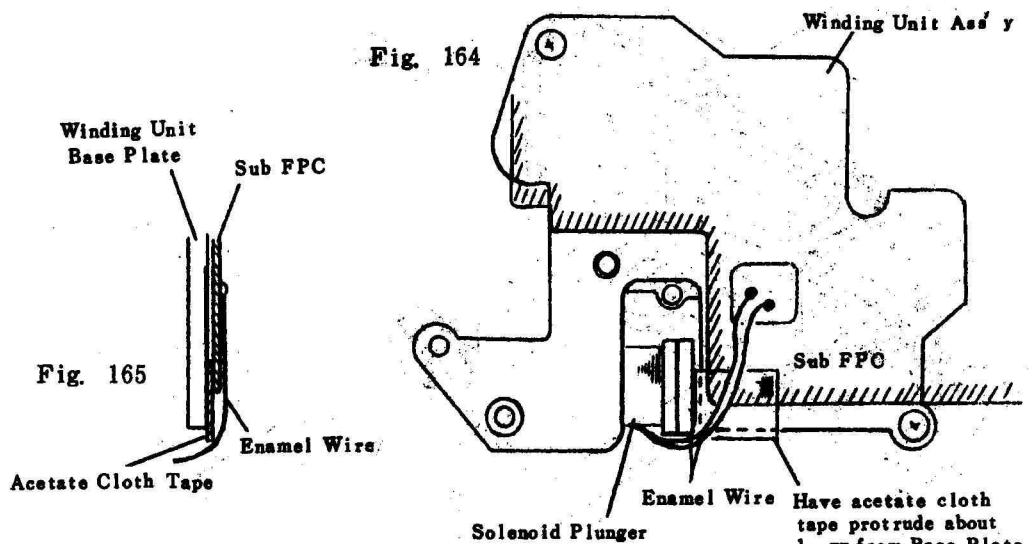
Fig. 163

Note : a) Tighten the Setscrews only after making sure that the end of the Sprocket Shaft is properly inside the Sprocket Shaft Bearing.

[Application of Acetate Cloth Tape]

There are cases where a short results between the enamel wire of the Solenoid Plunger and the Winding Unit Base Plate. To prevent this short, apply acetate cloth tape in the position indicated in the illustration below.

It is not necessary to use acetate cloth tape, however, when the form of Sub FPC is modified.



C-2-5 Installation of Mirror Box Ass'y

1. Pass the Spot Metering FPC ④ of the Mirror Box and the yellow and black lead wires ⑤ of the Mirror-up Switch through the camera body, and install the Mirror Box Ass'y in parallel with the camera body.

Notes:

- a) Have the red and black lead wires ③ of the winding motor led out to the left side.
 - b) Have the light blue and black lead wires ⑥ of the Shutter led out to the left side.
 - c) Do not allow the FPC and lead wires to be pinched between the Mirror Box and the camera body.
2. Tighten the Mirror Box Setscrews (66001061)×2 provisionally, having the camera body face up and holding the film surface of the camera body with the left hand.

Note : a) Never tighten the Mirror Box Setscrews with film surface of the camera body down. (See Page. B-23)

3. Tighten the Mirror Box Setscrews (63927026)×2 with the body mount surface of the camera body.
4. Tighten the Mirror Box Setscrew (61924026) with erecting the camera body.
5. Install the Eye-Piece Ass'y, secure it with one Setscrew, and then tighten up the Mirror Box Setscrews (66001061)×2.

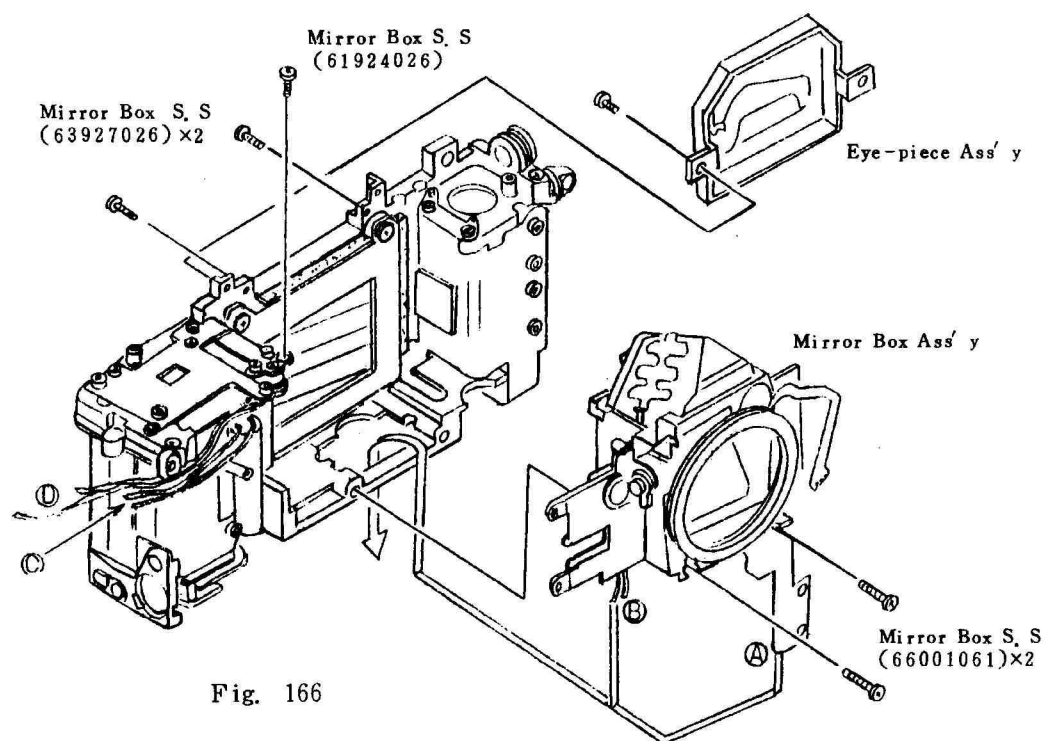


Fig. 166

C-2-6 Installation of QR Lever Ass'y

Fig. 167

1. Attach the Ratchet Spring (1AA49820) to the QR Lever Ass'y (1AAAA160) and hook up the Ratchet Spring.

2. Turn the S. Charge Cam clockwise (mirror charge direction) (arrow ①) until it stops, then turn it counter-clockwise (shutter charge direction) (arrow ②) until it stops.

This is the initial position of the S. Charge Cam Ass'y.

3. Move the pin of the Mirror-up Arm Ass'y in the direction of the arrow ③, and install the QR Lever Ass'y in that state.

4. Set the QR Base Plate (1AA48010) and fix it by tightening the QR Base Plate Setscrews (61912026)×2, (63903026)×2. (See Fig. 34)

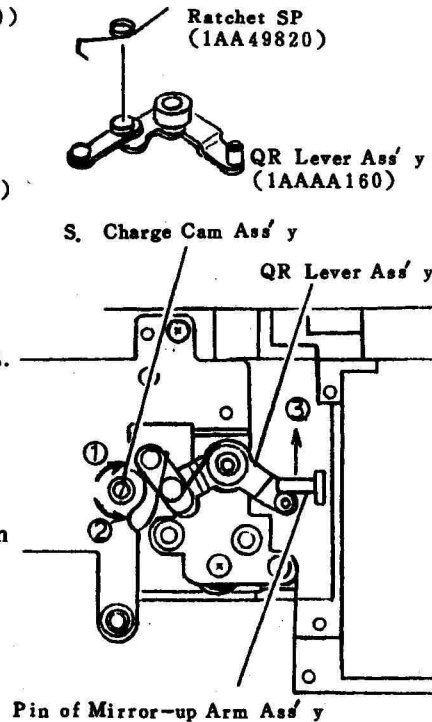


Fig 168

C-2-7 Checking of Mech. Bulb Operation

- * The operation of the Mech. Bulb must be checked after installing the Mech. Bulb Ass'y.

[Checking Procedure]

1. Install the Mech. Bulb Ass'y. (See Page. B-15)
2. Push the Mech. Bulb Slide Plate to the right (Body mount side). (See Fig. 169)
3. With the Mech. Bulb Slide Plate pushed to the right, turn the S. Charge Cam clockwise (see C-2-6) for mirror-up.
4. Make certain at this time that the shutter is open.
5. Also make certain that the shutter closes when the Mech. Bulb Slide Plate is released.

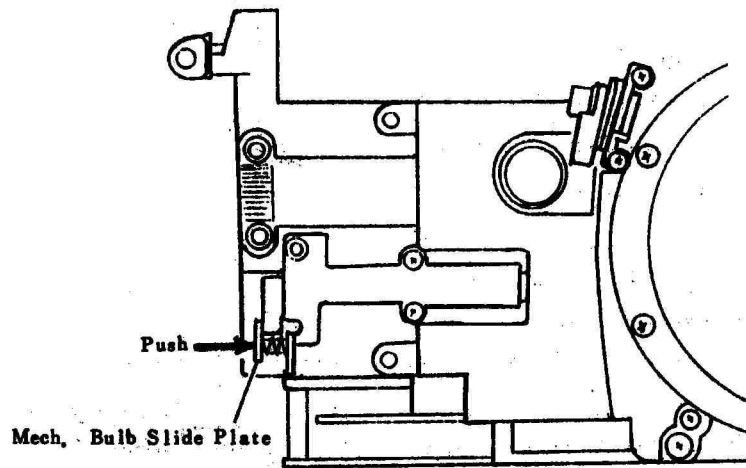


Fig 169

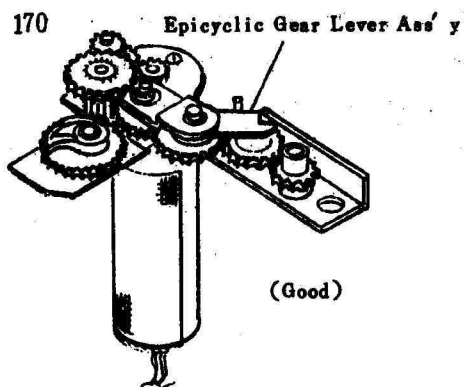
C-2-8 Installation of Rewing Base Plate Ass'y

1. Twist the red and black lead wires of the Rewind Motor, pass them through the hole in the camera body, and install the Rewind Base Plate Ass'y.

Notes:

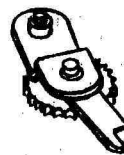
- a) When installing the Rewing Base Plate Ass'y, the Epicyclic Gear Lever Ass'y must be in the position shown in Fig. 170. Do not install it with the Epicyclic Gear Lever Ass'y set as shown in Fig. 171 or Fig. 172. Otherwise, the Epicyclic Gear Lever Ass'y will get bent, hitting the surface A of the camera body. (See Fig. 174)

Fig 170



(Good)

Fig. 171



(Not acceptable)

Fig. 172



(Not acceptable)

- b) Position the pink and light blue lead wires of the Came P.C. Board above the Rewind Base Plate before installing the Rewing Base Plate Ass'y. (See Fig. 174)

2. Lead the red and black lead wires of the Rewind Motor between the Mount Base and FPC.

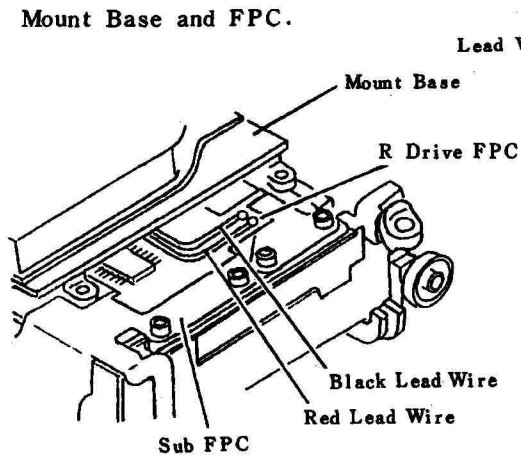


Fig. 173

3. Tighten the Rewind Base Plate Setscrews (61813026)×4.
4. Solder the red and black lead wires of the Rewind Motor.

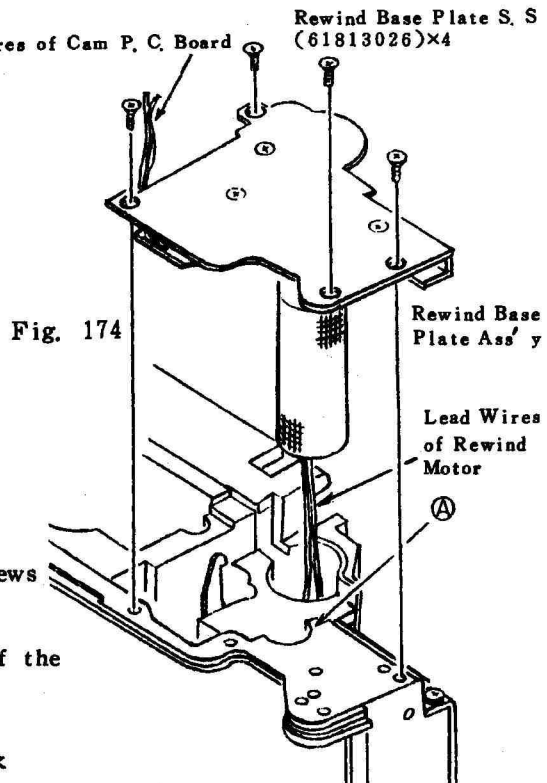
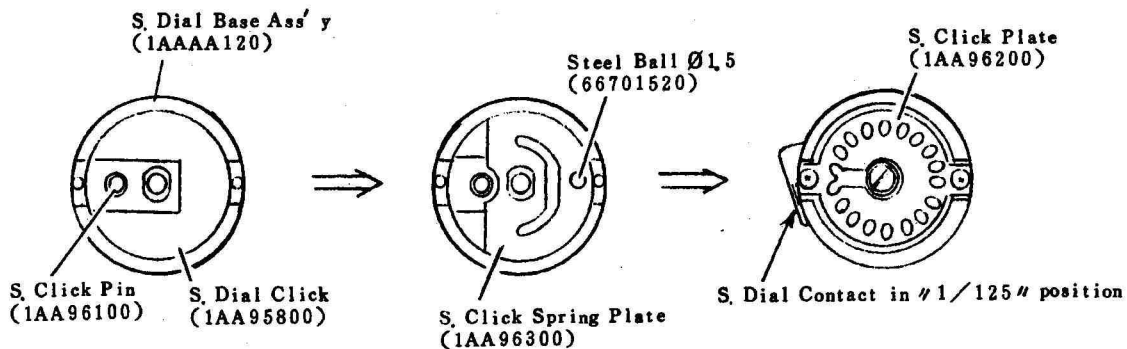


Fig. 174

C-2-9 Installation of S. Dial Click

1. Install the S. Dial Base Ass'y (1AAAA120).
2. Install the S. Dial Click (1AA95800) in the S. Dial Base Ass'y. Set the S. Click Spring (1AA95900) and S. Click Pin (1AA96100) in the hole in the S. Dial Click.
3. Install the S. Click Spring Plate (1AA96300). Set the Steel Ball (66701520) in the hole in the S. Click Spring Plate and tighten the S. Dial Click Setscrew (1AA96000).
4. Install the S. Click Plate (1AA96200) and tighten the S. Click Plate Setscrews (61902526)×2. (See Fig. 10)

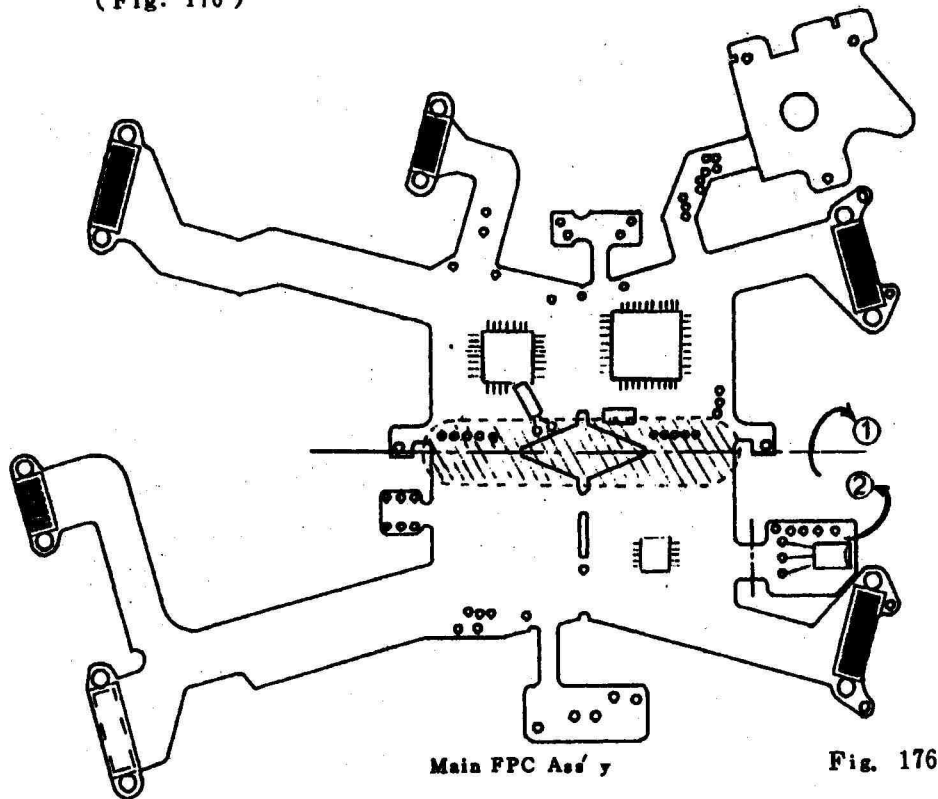
Fig. 175




C-2-10 Forming of FPC

1. Forming of Main FPC Ass'y

Before installing a new Main FPC Ass'y, be sure to perform bending in the direction of the arrows in the order of ① to ②. (Fig. 176)

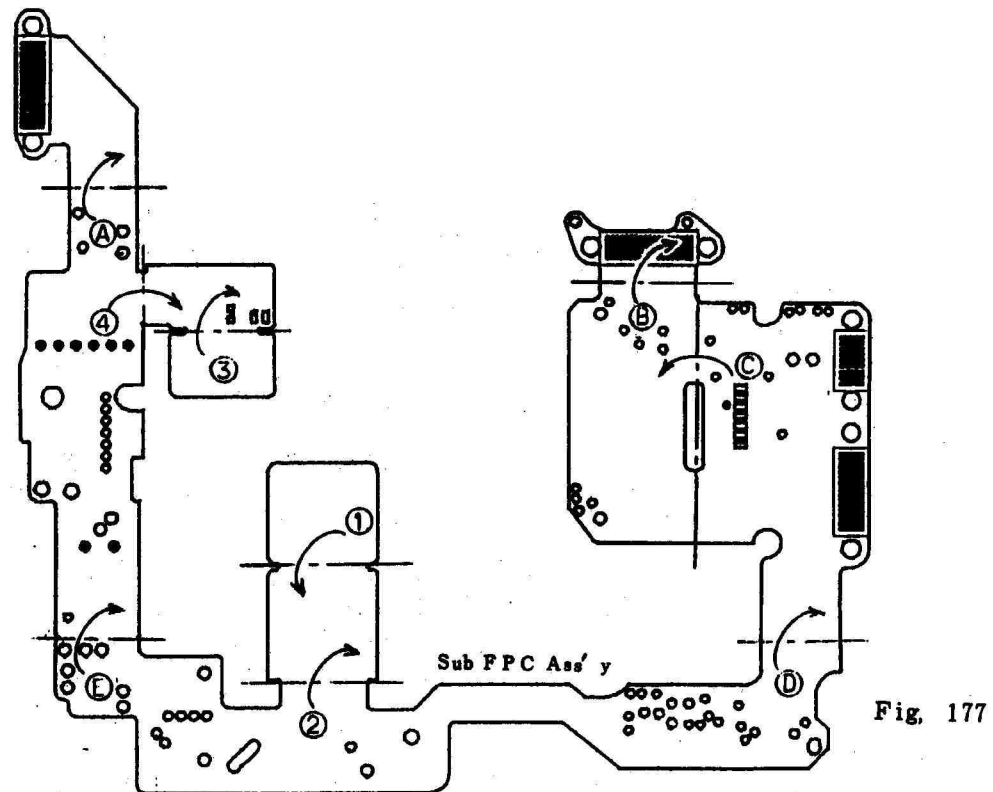


Note : a) In bending instructed above, take care not to brake the  area of the FPC by excessive bending.

2. Forming of Sub FPC Ass'y

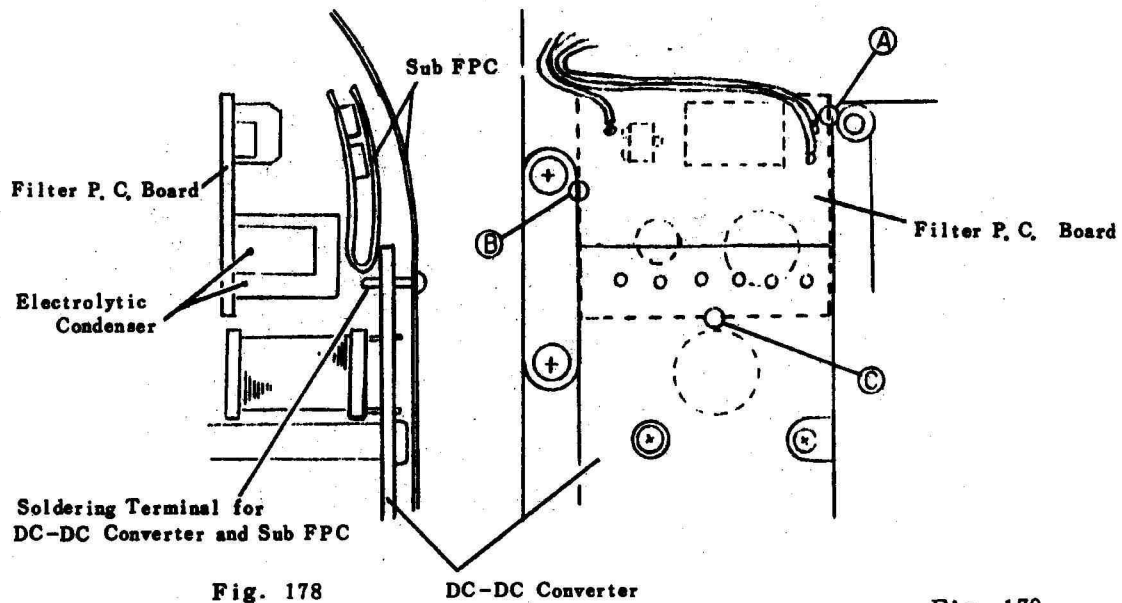
Before installing a new Sub FPC Ass'y, be sure to perform bending in the direction of the arrows in the order of ① to ② and ③ to ④. (Fig. 177)

Also bend the Sub FPC Ass'y gently in the direction of arrows ④ to ⑤ by 90 degrees.



C-2-11 Installation of Filter P. C. Board

1. Install the Filter S. C. Board as shown in Fig. 178.

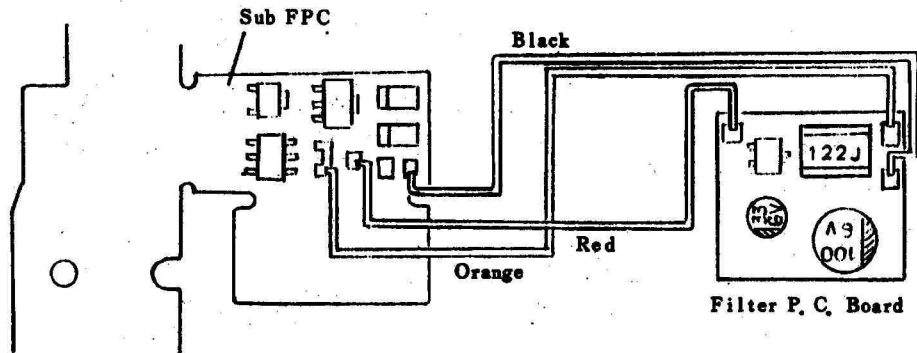


Notes:

- a) Lock the Filter P.C. Board at the three points **A**, **B** and **C**.
(See Fig. 179)
- b) The soldering terminal for the DC-DC Converter and Sub FPC must not be in contact. If it is in contact, the power transistor will be burned out at power-on.

[Wiring Diagram of Filter P.C. Board]

Fig. 180



C-2-12 Notes on Soldering (Bottom of Camera Body)

- a) In soldering the lead wires at the bottom of the camera body, minimize the solder height. As there is little clearance between the camera body and the cell case, a high solder is pressed by the cell case and can cause shorting.
- b) After soldering the lead wires, fix acetate cloth tape.

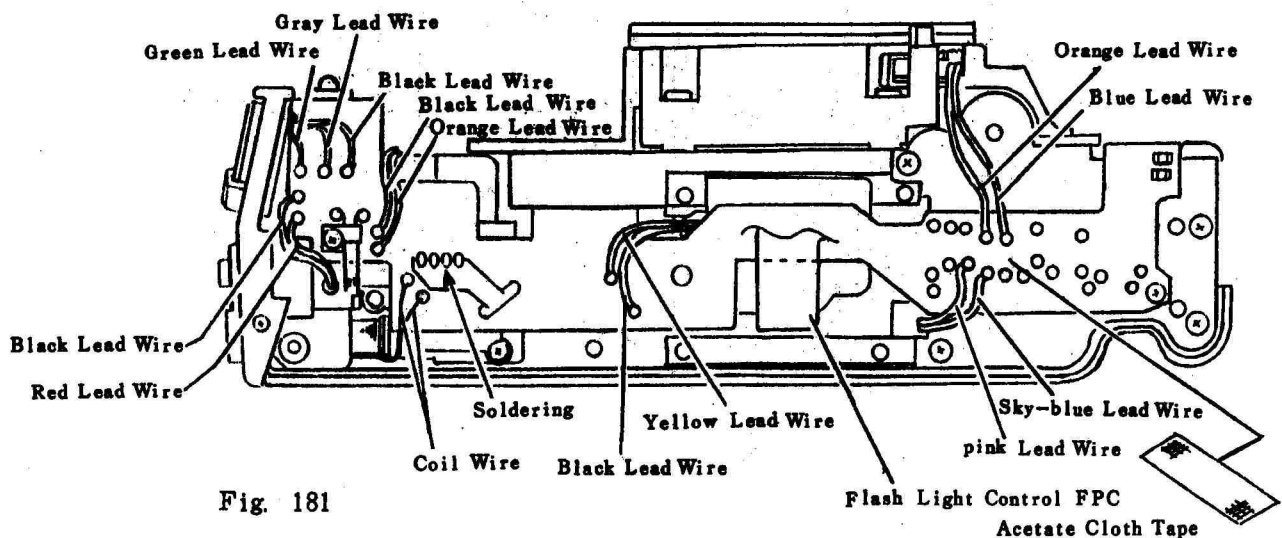
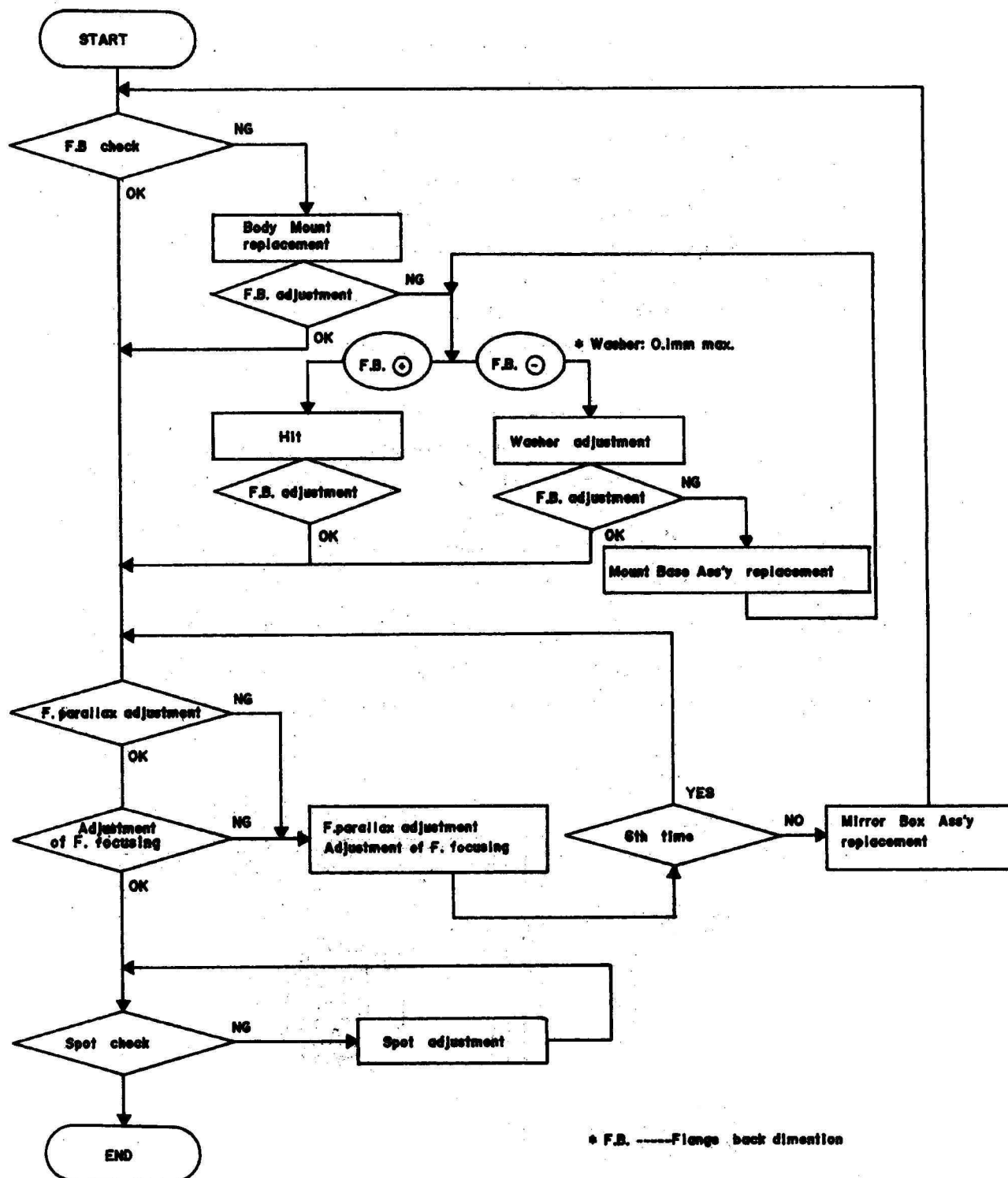


Fig. 181

C-3 Adjustments, etc.

C-3-1 Adjustment of Finder Focusing



1. Flange Back Adjustment

- o Distance from the lens mount surface to the rail surface on the pressure plate side:
 $45.60 \pm 0.02 \text{ mm}$
- o Difference in level between the rail surface on the pressure plate side and that on the film side:
 $0.2 \pm 0.02 \text{ mm}$

2. Finder Parallax Check

- ① Affix an F. parallax check chart (Chart A) on a wall.
- ② Mount a lens (Planar 50/F1.4) to the camer.
- ③ Affix a frosted sheet glass on the film slide surface of the camera.
- ④ Mount the camera on the tripod.
- ⑤ Set the tripod so that the optical axis of the camera is perpendicular to the chart and the distance from the chart to the frosted glass is one meter.
- ⑥ Adjust the focus of the lens and perform mirror-up.
- ⑦ While looking at the image on the frosted glass, adjust the optical axis of the camera to the center of the chart and simultaneously adjust the position in the horizontal direction.
- ⑧ With the mirror down, look at the image in the finder and make sure that the image is not deflected from that on the frosted glass.

[When deflection is large (out of specification limit)]

Adjust the position of the Penta Prism Holder Ass'y so that the image in the finder coincides with that on the frosted glass.

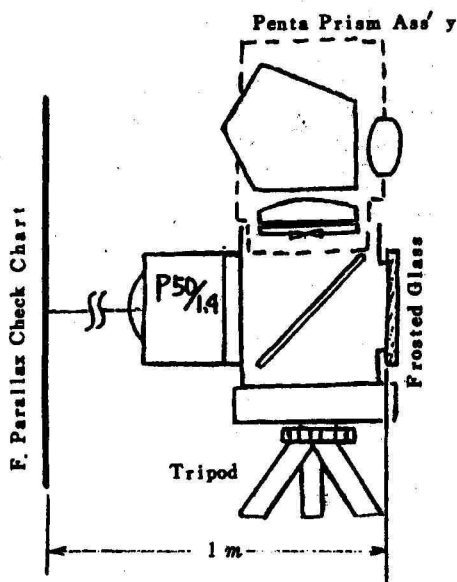


Fig. 182

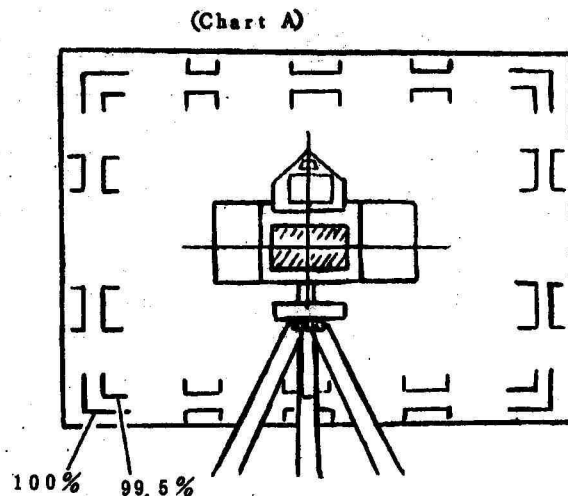


Fig. 183

3. Adjustment of Finder Focusing

1. Rough adjustment of finder focusing

Replace the washer placed under the Penta Prism Holder to make adjustment. (See Fig. 49.)

- ① When the focus is not adjusted when the focus ring on the lens is turned to the infinity position
 - The finder back is too long. Lower the focusing screen to shorten the finder back.
- ② When the focus is adjusted before the focus ring on the lens is turned to the infinity position
 - The finder back is too short. Raise the focusing screen to lengthen the finder back.

2. Fine adjustment of finder focusing

- Adjust the vertical position adjusting screw for the mirror only when 0.1mm or less moving of the standard lens Planer 1.4/50 is required.

A. When the Main FPC Ass'y has not been installed

- ① Install a mechanical cable release in the Bulb-dedicated Cable Release Socket.
- ② Lock the mechanical cable release by pressing.
- ③ Turn the S. Charge Cam Ass'y clockwise, and mirror-up performed and the shutter will be opened. (See Fig. 148)
- ④ From the aperture side, turn the vertical position adjusting screw for the mirror.
- ⑤ Unlock the mechanical cable release, and the shutter will be closed.
- ⑥ Turn the S. Charge Cam Ass'y counterclockwise, and the mirror will return.
- ⑦ Check finder focusing again.
- ⑧ If finder focusing is not proper, follow the procedure ② to ⑦ again.
- ⑨ Check finder parallax.
- ⑩ Adjust the spot metering position.

B. When the Main FPC Ass'y has been installed and operates normally

- ① Install a mechanical cable release in the Bulb-dedicated Cable Release Socket.
- ② Turn on the main switch and lock the mechanical cable release by pressing.
- ③ Press the release button on the camera, and the shutter will be opened.
- ④ From the aperture side, turn the vertical position adjusting screw for the mirror. (See Fig. 184)
- ⑤ Unlock the mechanical cable release, and the shutter will be closed.
- ⑥ Check finder focusing again.
- ⑦ If finder focusing is not proper, follow the procedure ① to ⑥ again.
- ⑧ Check finder parallax.
- ⑨ Adjust the spot metering position.

Notes:

- a) After adjustment of finder focusing, be sure to check finder parallax and the spot metering position.
- b) After adjustment of finder focusing, operate the shutter several times and then check finder focussing again.
- c) Turn the vertical position adjusting screw for the mirror with care not to peel the coating.

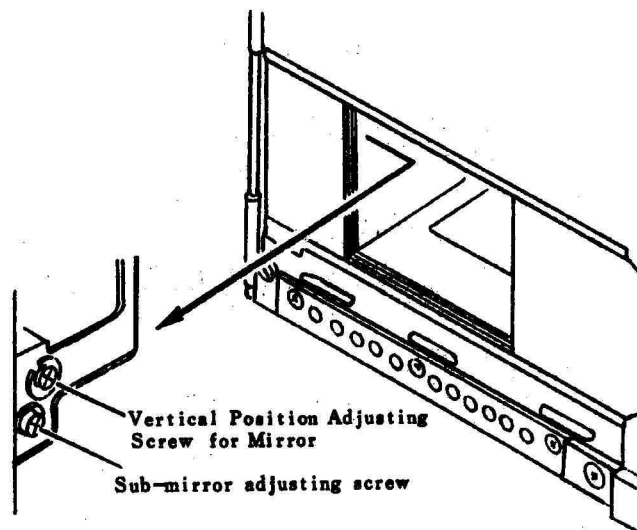


Fig. 184

4. Check of Spot Metering

- ① Affix a spot check chart (Chart C) on the parallax check chart on the wall. (Position the chart correctly.)
- ② Mount a lens (Planar 50/F1.4) on the camera.
- ③ Mount the camera on the tripod.
- ④ Set the tripod so that the optical axis of the camera is perpendicular to the chart and the distance from the chart to the film surface is one meter.
- ⑤ Adjust the focus of the lens and then adjust the optical axis of the camera to the center of the chart.
- ⑥ With the power switch of the camera turned on, perform half releasing in spot and AE mode and look at the shutter speed display in the viewfinder.
- ⑦ Swing the camera vertically and horizontally and make sure that the shutter speed is highest When the white circle on the chart is at the center of the viewfinder. (Non-defective camera)

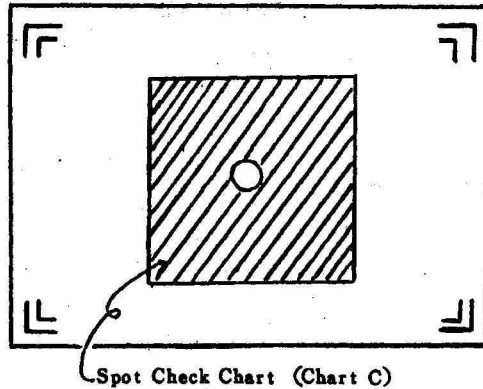


Fig. 185

5. Adjustment of spot metering

- * After adjustments [A] and [B], perform final check using the Chart C.

[A] Adjustment in lateral direction

- ① Affix a spot check chart (Chart B) in the standing position on the F. parallax chart on the wall. (Position the chart correctly.)
- ② Mount a lens (Planar 50/F1.4) on the camera.
- ③ Remove the Tripod Screw Base Ass'y from the camera and install a tripod fixture instead.
- ④ Lock the tripod fixture on the tripod so that the camera is installed upside down.
- ⑤ Adjust the focus of the lens and then adjust the optical axis of the camera to the center of the chart.
- ⑥ Loosen the four Spot Metering Base Setscrews, turn the Spot Metering Adjustment Pin, perform half release in spot and AE mode and lock the Spot Metering Base where the shutter speed is highest. (Tighten the four screws and lock them with Screw-Lock. (See Fig. 187))

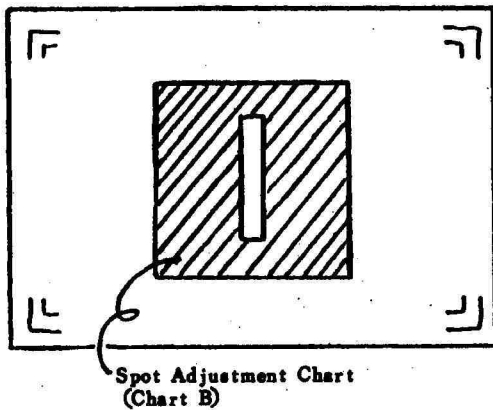


Fig. 186

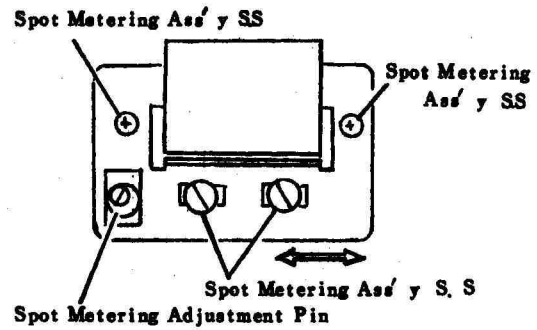


Fig. 187

[B] Adjustment in vertical direction

- ⑦ Affix the spot check chart (Chart B) in the lying position.
(Position the chart correctly.)
- ⑧ Turn the Sub-mirror Adjustment Screw and lock it where the Shutter speed is highest. (Lock the screw with Screw-Lock.)
(See Fig. 184)

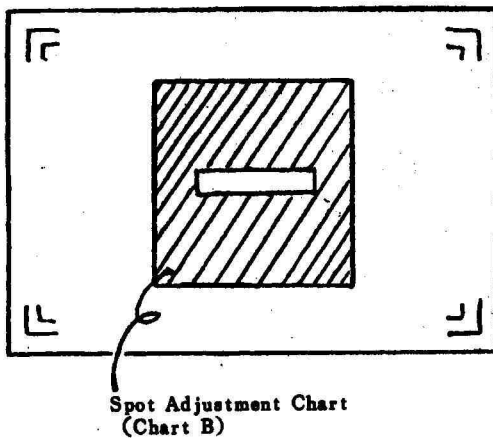


Fig. 188

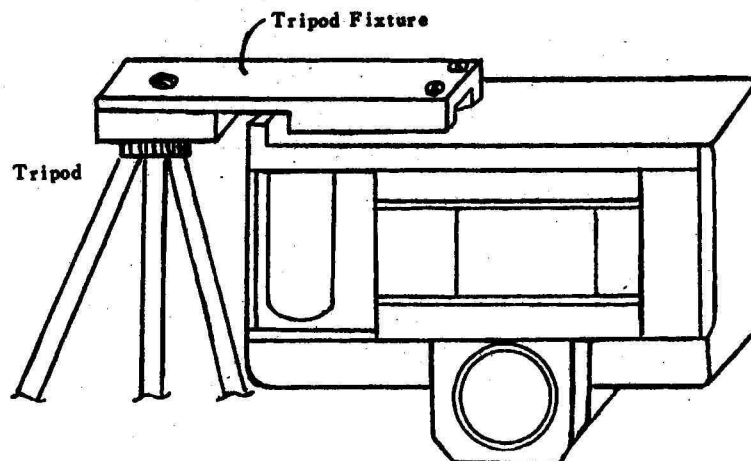


Fig. 189

C-3-2 Adjustment of Perforation Position

* Use a non-exposed and developed Black and White film as a perforation position gauge.

1. With the main switch turned on, turn the Rewind Knob, while pressing the Rewind Lock Release Button, to perform rewinding.
2. Open the back cover and loosen the Sprocket Setscrews (66001136)×2 in the lower part of the sprocket. (See Fig. 160)

Notes : a) Do not loosen the two sprocket setscrews in the upper part of the sprocket.

3. Close the back cover and perform film advance operation without film.
4. Tighten temporarily one of the two Sprocket Setscrews loosened in step 2.
5. Turn the sprocket counterclockwise (in the direction of film winding) until it is stopped.
6. Loosen the Sprocket Setscrew tightened temporarily.
7. Place the film for perforation position adjustment on the aperture and sprocket.
8. Make adjustment according to the procedure ① to ④ below. Tighten the Sprocket Setscrew.
9. Remove the film for perforation position adjustment.
10. Close the back cover and perform film advance operation without film.
11. Open the back cover and turn the sprocket counterclockwise until the sprocket is stopped. Then check the perforation position.

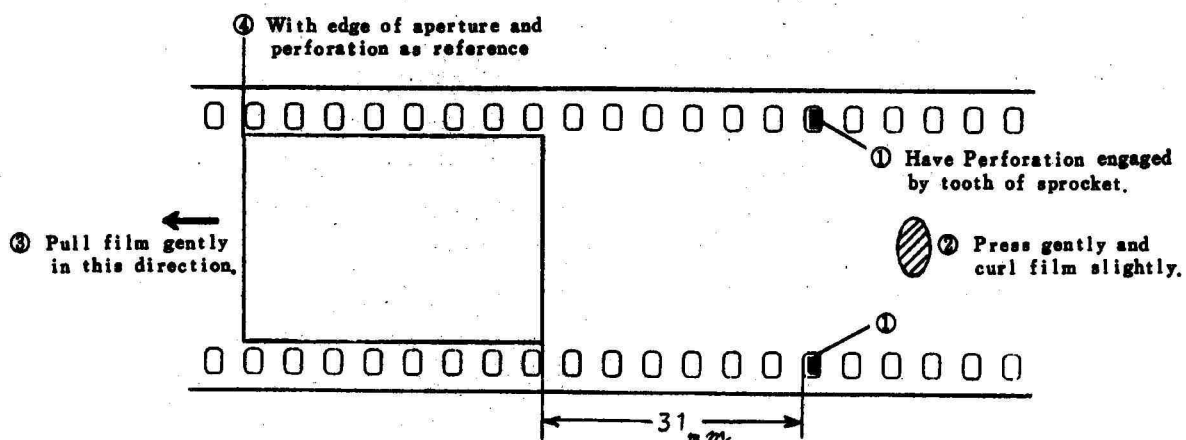


Fig 190

12. When the perforation position is proper, perform rewinding and tighten the other of the Sprocket Setscrews.
13. If the perforation position is not proper, loosen the Sprocket Setscrew and make adjustment again.

C-3-3 Adjustment of Viewfinder Display

Viewfinder Display

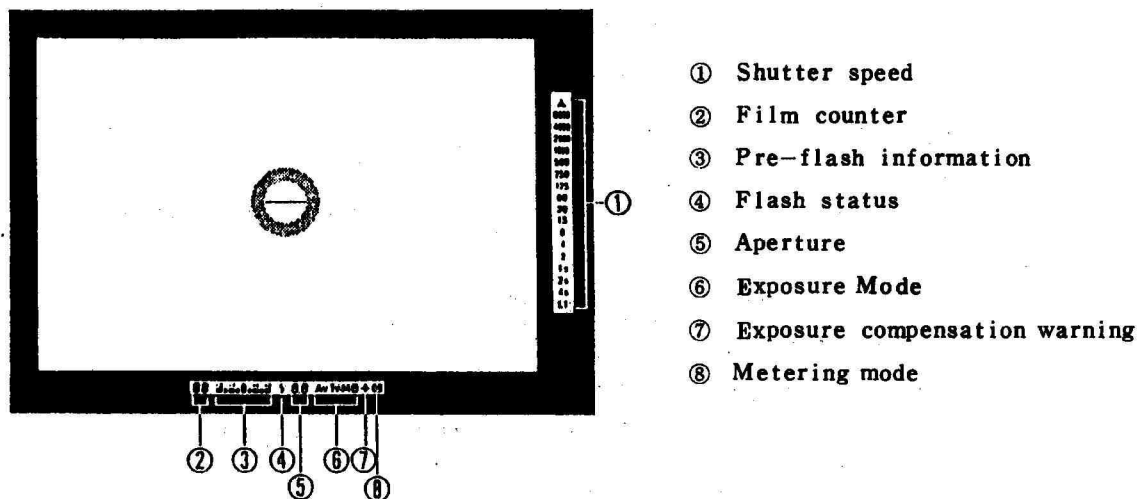


Fig. 191

- * Position your eye at the center of the eyepiece and make adjustment so that the whole shutter display "▲" to "LT" is seen without eclipse.
- ① Adjust the Viewfinder Indicator Adjustment Screws (1AA82000)×2 so that the whole shutter display from left to right is seen without eclipse.

Note : a) After adjustment, lock the Viewfinder Indicator Adjustment Screws with Cemedine 551A.

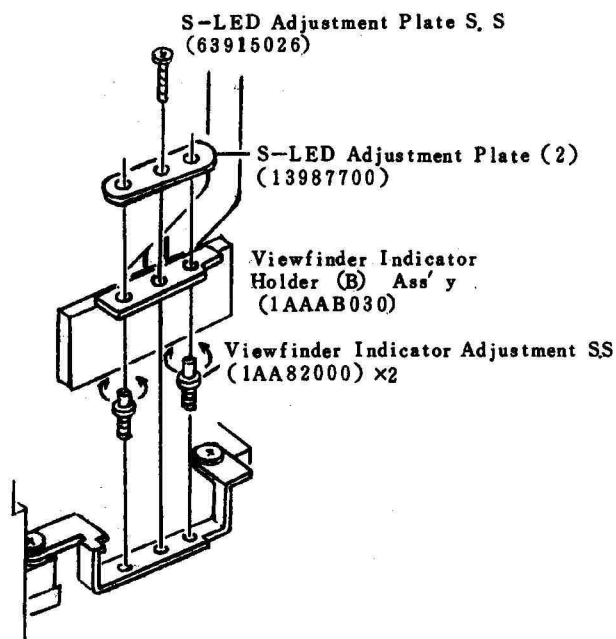


Fig. 192

2. Adjustment of Viewfinder Indicator (A) Ass'y position

- * Position your eye at the center of the eyepiece and make adjustment so that the whole display from the film counter to metering mode is seen without eclipse.
- ① Remove the Eye-piece Ass'y (1AAAA060) and Dioptic Adjustment Ass'y.
- ② Loosen the Viewfinder Indicator (A) Ass'y Setscrew (69112066)×2 and move the Viewfinder Indicator (A) Ass'y (1AAAB230) back and forth until it is positioned in parallel.
- ③ Install the Dioptic Adjustment Ass'y temporarily and make sure that the Viewfinder Indicator (A) Ass'y is in parallel.

Notes:

- a) After adjustment, tighten the Viewfinder Indicator (A) Ass'y Setscrews gently and lock them with UV adhesive (epoxy resin adhesive).
- b) Take care not to peel or damage the Viewfinder Indicator Prism (A) when installing the Viewfinder Indicator (A) Ass'y under the Penta Prism Holder.

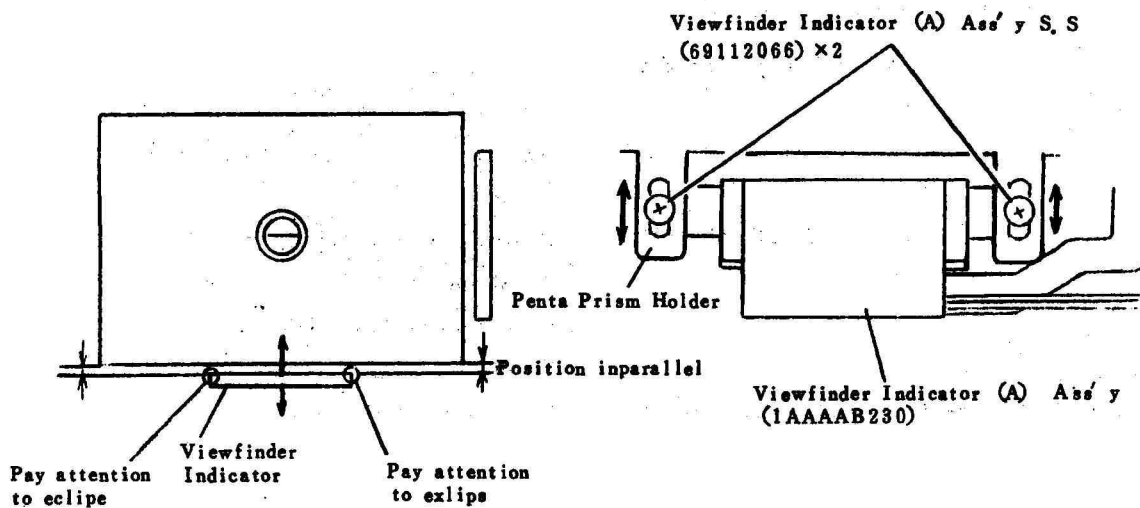


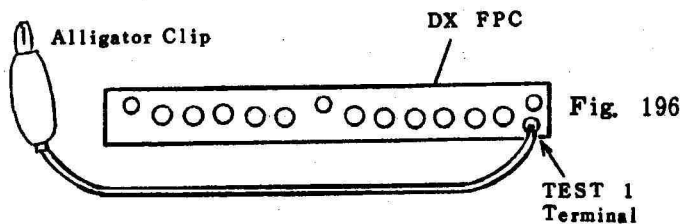
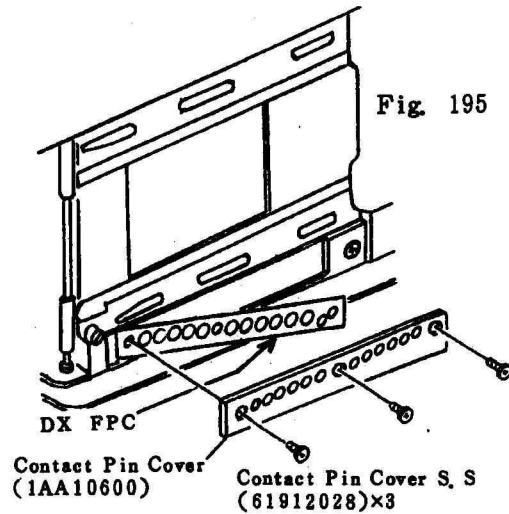
Fig. 193

Fig. 194

C-3-4 Adjustment of Compensation Value

1. Setting of test mode

- ① Remove the Contact Pin Cover
Setscrew (61912028)×3 and
take off the Contact Pin Cover
(1AA10600).
- ② Solder a lead wire to the TEST
1 terminal.
- ③ Connect the alligator clip to
the GND terminal (camera body),
and the camera will enter in test
mode.



In test mode, the camera performs the following operations depending on the setting positions of the drive mode switch:

S or CL or CH or MULTI-EX.:	Normal operation (No power-off after 16 seconds)
SELF 2 SEC:	Display and change of adjusted value
SELF 10 SEC:	Display of shutter operation count and automatic setting of adjusted ISO resistance Value

2. Display, Change and registration of adjusted values (write in EEPROM)

Drive mode=SELF 2 SEC

(1) Display of adjusted value

An adjusted value selected according to the shutter dial position is displayed in the film counter position.

With (-) data, the counter display and winding mark light up.

With (+) data, the counter only is displayed.

Time Dial	Adjustment Items
8 0 0 0	Shutter speed
4 0 0 0	Aperture control delay pulse
2 0 0 0	Flash control value
1 0 0 0	Flash metering value
5 0 0	Reference average metering value
2 5 0	Average metering inclination
1 2 5	Reference spot metering value
6 0	Spot metering inclination
3 0	Reference aperture resistance value
1 5	Aperture resistance inclination
8	Reference ISO resistance value
4	ISO resistance inclination
2	Flash metering display
1 S	Flash control display
2 S	Battery check level B 1 (Warning)
4 S	Battery check level B 2 (Operation stop)

- Notes:**
- When the exposure mode switch is in the "Av B" position, no time setting is displayed in the viewfinder.
(The operation in adjustment mode is the same as that in M Tv mode, except for the out of time setting display.)
 - The winding mark with (-) data is displayed in the external counter only. That is, there is no display representing (-) in the viewfinder.
 - When power is turned on by "TEST I = L" during power-off, the viewfinder indicator does not light up. In this case, change drive mode from SELF2 to another once, and the viewfinder indicator will light up.

(2) Change of adjusted value

With the adjusted value displayed, operate the release switch to change it.

Turn on the release switch with main switch in the "ON" position to increase the adjusted value by one.

Turn on the release switch with the main switch in the "AE Lock" position to decrease the adjusted value by one.

(3) Storage of adjusted value = Write in EEPROM

The adjusted value changed in (2) is stored in memory by writing in EEPROM. (Without write in EEPROM, the previous data is read and the new data is destroyed at power-on.)

Drive mode: SELF 2 SEC

Time dial : X 125

In these settings, the film counter displays 66. Under these conditions, turn on the release switch to write the current data in EEPROM.

3. Shutter operation count display

Drive mode: SELF 10 sec

Time dial: 8000

In these settings, the film counter displays the shutter operation count in thousands. The figures below the position of the thousands are omitted.

Example:

When the shutter operation count is 12,800.

The film counter displays 12.

Note: The shutter operation count data is not changed by release operation.

4. Adjustment procedure

(1) Adjustment of aperture resistance

The aperture stop down setting value is detected by reading the resistance-divided voltage after A-D conversion.

For adjustment of the aperture resistance, the reference resistance value represents the difference between the A-D value and the theoretical value for zero aperture stop down (full-aperture position) and the adjusted resistance inclination value is the difference between the change in A-D value for 1/6 step and the theoretical value.

- o The resolution of the adjusted reference value is 1LSB at A-D conversion, thus V_{cc} (about 5 V) / 256 V. When the adjusted value increases by 5, the aperture stop down value increases by 1/6 step.

Setting range: -127 to 128

- o The resolution of the adjusted inclination value is 0.03125 ($= 2^{-5}$).

Setting range: -4 to 3.968 (Adjusted value: -128 to 127)

Mount a lens (Planner 50mm/1.4) and adjust the aperture resistance while looking at the aperture display in the viewfinder.

* LSB: Least significant bit, 1s digit

(1)-I Adjustment of Reference

Drive mode: SELF 2 SEC

Shutter dial: 30 (1/30 sec)

In these settings, the counter displays an adjusted reference value.

- ① Set aperture to 1.4 .

Press the release with the main switch in the "ON" position, and the adjusted value will increase by one. Increase the adjusted value so that the aperture display in the viewfinder changes from 1.4 to 1.7. At change to 1.7, record the adjusted value (film counter value).

- ② Change the position of the main switch to "AE-L" and press the release, and the adjusted value will decrease by one. Decrease the adjusted value so that the aperture display in the viewfinder changes from 1.4 to 1.2. At change to 1.2, record the adjusted value.

Note: When the aperture display is 1.7 or above at the beginning, make adjustment in the sequence of ② to ①. However, if the aperture display is very large like 64 or 27, make adjustment ① first. The display will change from 64 to 1.2 by increasing the adjusted value.

- ③ Calculate an adjusted value.

$$\frac{(\text{Adjusted value at change to 1.7}) - (\text{Adjusted value at change to 1.2})}{2} = \text{Adjusted value}$$

- ④ Set the calculated value.

(1)-(II) Adjustment of Inclination (continued from (5)-I)

- ⑤ Set aperture to F16.

Set the shutter dial to 15 (1/15).

The film counter displays an adjusted inclination value.

- ⑥ Press the release with the main switch in the "ON" position, and the adjusted value will increase by one. Increase the adjusted value so that the aperture display in the viewfinder changes from 16 to 13. At change to 13, record the adjusted value (film counter value).

- ⑦ Change the position of the main switch to "AE-L" and press the release, and the adjusted value will decrease by one. Decrease the adjusted value so that the aperture display in the viewfinder changes from 16 to 22. At change to 22, record the adjusted value.

- ⑧ Calculate an adjusted value.

$$\frac{(\text{Adjusted value at change to 13}) - (\text{Adjusted value at change to 22})}{2} = \text{Adjusted value (Round to the nearest whole number.)}$$

- ⑨ Set the adjusted value.

- ⑩ Write the data in EEPROM.

Set the shutter dial to "X125" and press the release.

Note: If the display does not become normal even by change of the adjusted value, the open F. code is abnormal.

(Information: Aperture display = Open F. code + Aperture stop down value)

(2) Adjustment of ISO resistance

The ISO setting value is detected by reading the resistance-divided voltage after A-D conversion.

For adjustment of the ISO resistance, the reference ISO resistance value represents the A-D value and the theoretical value for ISO 6400 and the adjusted ISO resistance inclination value is the difference between the change in A-D value at 1/3 step and the theoretical value.

The resolution of the adjusted reference value is 1LSB at A-D conversion, thus $V_{cc} (5V) / 256V$. When the adjusted value increases by 5, the ISO value decreases by 1/3 step. The resolution of the adjusted inclination value is $0.03125 (= 2^{-5})$

(2)-I Automatic setting of adjusted ISO resistance value

Perform the operations instructed below, and the camera will automatically calculate and set an adjusted reference value and inclination value.

Drive mode: SELF 10

Time dial : 8 (1/8 sec)

In these settings, the film counter displays "64".

- ① Set ISO to 6400. (The counter display "64" means ISO 6400.)
- ② Press the release, and the counter will display "06".
- ③ Set ISO to 6.
- ④ Press the release, and system will return to the initial state with the counter displaying "64".

When ① to ④ are executed, the camera automatically calculates the reference ISO resistance value and adjusted ISO resistance inclination value sets them. The camera does not perform writing in EEPROM. Therefore, perform writing in EEPROM after adjustment the same way as other adjustments.

- ⑤ Set drive mode to SELF 2 and the time dial to "X125".
(Write mode)
The counter displays "66".
- ⑥ Press the release. (Execution of writing)

(3) Adjustment of shutter speed : Adjustable range

7/8 to 0 TV (1/8000)

4/8 to -4/8 TV (1/4000)

At change of the adjusted value by one, the control time is adjusted by 0.125 TV.

Exposure mode = Manual

Time dial = 8000

In these settings, measure time with a shutter tester and obtain an error expressed in a TV (EV) value.

$$\text{Error} = \{ \text{Log}(\text{time}) / \text{Log}(2) \} - 7 \quad (\text{Unit of time: } \mu\text{s})$$

From the error, calculate an adjusted value as follows:

$$(\text{Obtained error}) / 0.125 = \text{Adjusted value}$$

Add this adjusted value to the preset adjusted value and write the summation in the camera. (See 2-(2))

Example:

- ① Check the adjusted shutter speed value. (See 2-(1))
- ② Change drive mode from SELF 2 SEC to CH and measure the shutter speed with a shutter tester.
- ③ Calculate an adjusted value.

Preset adjusted value = 3

When the time measured is 110 μs

$$\begin{aligned} \text{Error} &= \{ \text{Log}(110) / \text{Log}(2) \} - 7 \\ &= -0.219 \text{ TV} \end{aligned}$$

$$\text{Adjusted value} = -0.219 / 0.125$$

$$= -1.75$$

$$= -2 \text{ (rounded)}$$

$$\text{Final adjusted value} = \text{Preset adjusted value (checked in ①)}$$

$$+ \text{Newly obtained adjusted value}$$

$$= 3 + (-2)$$

$$= 1$$

- ④ Return drive mode to SELF 2 SEC (counter displaying preset adjusted value "3") and set the main switch to "AE Lock" (to decrease the adjusted value).
- ⑤ Press the release two times.
Press of the release will change the counter display like 3→2→1.
- ⑥ Change drive mode to CH and check the shutter speed.
- ⑦ Return drive mode to SELF 2 SEC and write the data in EEPROM.
(See 2-(3))

- Note:**
- o At 1/8000, no (–) data are taken into account. (–) data are effective at 1/4000 or below.
 - o When an error is obtained at 1/4000, double the error and calculate an adjusted value.

Allowable range of shutter speed

Time	Upper limit	Reference value	Lower limit
4"	4287.	4000.	3732.
2"	2143.	2000.	1866.
1/ 1	1071.	1000.	933.
1/ 2	535.8	500.0	466.5
1/ 4	267.9	250.0	233.2
1/ 8	138.6	125.0	112.6
1/ 15	69.34	62.50	56.32
1/ 30	34.67	31.25	28.16
1/ 60	17.33	15.62	14.08
1/ 125	8.66	7.81	7.04
1/ 250	4.64	3.90	3.28
1/ 500	2.32	1.95	1.64
1/1000	1.16	0.97	0.82
1/2000	0.601	0.488	0.397
1/4000	0.322	0.244	0.185
1/8000	0.173	0.122	0.086

Unit: ms

o Curtain travel speed

The first and second curtains travel the distance of 21mm in about 2.75ms (information only).

(4) Adjustment of exposure

(Make the following adjustments for average metering and spot metering.)

Adjust the reference value at brightness of LV12 and then the inclination value at brightness of LV8

(4)-I Adjustment of reference exposure

Change of the adjusted value by one corrects 0.125 EV.

Adjustable range: -16 to 15.875 EV

After adjustments (1), (2) and (3), change the adjusted inclination value to "00". (See 2-(2))

With exposure mode set to AV, measure the exposure error.
(LV12, aperture 5.6)

From the error, calculate an adjusted value as follows:

$$\text{Exposure error} / 0.125 = \text{Adjusted value}$$

Subtract this adjusted value from the preset adjusted value and write the resultant value in the camera. (See 2-(2))

Example:

- ① Check the adjusted reference exposure value.
(See 2-(1). Average metering: Time 500, Spot metering: Time 125)
- ② Change the adjusted exposure inclination value to "00".
(See 2-(2). Average metering: Time 250, Spot metering: Time 60)
- ③ Change drive mode from SELF 2 SEC to CH, set exposure mode to AV, aperture to 5.6 and measure exposure error with EE Tester.
(Brightness EE Tester LV12)
- ④ Calculate an adjusted value.

Preset adjusted value = 2

When the error measured is -0.3 EV

$$\text{Adjusted value} = -0.3 / 0.125$$

$$= -2.4$$

$$= -2 \text{ (rounded)}$$

$$\text{Final adjusted value} = \text{Preset adjusted value (check in ①)}$$

$$- \text{Newly obtained adjusted value}$$

$$= 2 - (-2)$$

$$= 4$$

- ⑤ Return drive mode to SELF 2 SET (counter displaying preset adjusted value "2") and set the main switch to ON (to increase the adjusted value).
- ⑥ Press the release two times.
Press of the release will change the counter display like 2→3→4.
- ⑦ Change drive mode to CH and check the exposure.

(4)-II Adjustment of inclination

Adjust the inclination after adjustment of reference Exposure made in I.

Change of the adjusted value by one corrects the inclination by $1 + (\text{adjusted value}) \times 2^{-7}$ times.

The reference position is LV12. By correction, the metering value will be decreased if the brightness is higher than LV12 or increased if the brightness is lower.

Adjustable range: 0.5 to 1.99 times

Example:

- ⑨ Set the brightness of the EE Tester to LV8 and measure the exposure error.
- ⑩ From the measured error, calculate an adjusted inclination value.

When error = 0.4 EV

Error \times 9.143 = Adjusted value

(This formula can be used only at LV8.)

$0.4 \times 9.143 = 3.66$

= 4

- ⑪ Return drive mode to SELF 2 and input the adjusted inclination value.

Average metering: Time 250, Spot metering: Time 60

(Press the release four times with the main switch in the "ON" position.)

- ⑫ Change drive mode to CH and check the exposure at LV12 and LV8.

- ⑬ If an error is found, repeat the above procedure from ①. When there is no error, return drive mode to SELF 2 and write the value in EEPROM.

(Time = X125, Release on, See 2-(3))

Note: When the adjusted value is decreased with the main switch in the "AE Lock" position, the metering value is locked. Therefore, return the main switch to "ON" when the exposure is to be checked after decrease of the adjusted value.

Auto exposure range

LV	Standard
LV 6	-0.4~+0.4 EV
LV 8	-0.4~+0.4 EV
LV 12	-0.4~+0.4 EV
LV 15	-0.5~+0.5 EV

K: 1.0 4 (K: 1.3)

ISO: 100 (ISO: 80)

(5) Adjustment of aperture control delay pulse

Adjust the aperture control delay pulse after completion of (1) adjustment of shutter speed and (2) Adjustment of exposure. Change of the adjusted value by one corrects 0.125 AV.

Adjustable range: -6 to 0

The values 1 and above can be processed the same way. However, there is some trouble in other adjusted values if this adjusted value is (+).

Measure the exposure error in TV mode at setting time of 125 and brightness of LV12 and calculate an adjusted value as follows:

$$\text{Adjusted value} = \text{Exposure error} / 0.125$$

Subtract the calculated value from the preset value.

Example:

- ① Check the preset adjusted value of aperture control delay pulse.
(See 2-(1). Time 4000)
- ② Set drive mode to CH, exposure mode to TV and shutter time to 125 and measure the exposure error with the EE Tester at LV12.

Preset adjusted value = -1

When exposure error = -0.25

- ③ Calculate an adjusted value.

$$\begin{aligned}\text{Adjusted value} &= -0.25 / 0.125 \\ &= -2\end{aligned}$$

- ④ Subtract the calculated value from the preset value.

Return drive mode to SELF 2, set the main switch to "AE Lock" and press the release two times. Each press of the release will cause change like -1 → -2 → -3.

- ⑤ Write the value in EEPROM.

Set the time to X125.

Press the release. See 2-(3)

* See the table on the previous page for Auto exposure range in TV mode.

(6) Adjustment of flash control value

Adjust the flash control value after completion of (2) ISO resistance adjustment.

Change of the adjusted value by one corrects $1/3$ EV.

Adjustable range: -8 to 0

There is no case where a plus value is input under normal conditions, because the center is deviated in the initial state.

In adjustment, mount a flash and perform flash control operation using the standard reflector as a subject. Make adjustment by intercepting all the light from outside.

- ① Mount the TLA280 on the camera and set the glancing angle to 50 and the mode switch to AUTO. Use normal flashing with one bulb.
- ② Set drive mode to S, exposure mode to AV, ISO to 100 and exposure compensation to 0.
- ③ Install the standard pressure plate on the aperture, mount the lens (Planar 50/f1.4) and set F-stop to F16.
- ④ Adjust the camera position so that the distance between the subject (standard reflector: reflectance 18%) and the film surface is 2.5 m.
- ⑤ Under these conditions, press the release to light the flash. At this point, measure the exposure with the flash meter and check the error relative to the optimum value.
- ⑥ Change the adjusted value so that the error is -1 ± 0.15 EV.
- ⑦ After input of the adjusted value, light the flash and check the error again for confirmation.

Example:

If the error measured by lighting the flash is -1.6 EV, input an adjusted value "-2" to change the error to -1.0 EV. To input and store the adjusted value "-2",

- ⑧ Set drive mode to SELF 2 SEC and the shutter dial to 2000.
- ⑨ Set the main switch to "AEL" and press the release two times.
- ⑩ At press of the release, the counter display changes like $0 \rightarrow 1 \rightarrow 2$ and the arrow indicating film advance lights up under the figure.
- ⑪ After confirmation of adjustment, set drive mode to X125 and press the release.

* If the standard pressure plate is not available, use the Kodak Ector Chrome 64.

(7) Adjustment of flash metering value

Adjust the flash control value after completion of (2) ISO resistance adjustment.

Change of the adjusted value by one corrects $1/3$ EV.

Adjustable range: -2 to $+5$

In adjustment, mount a flash and perform flash control operation using the standard reflector as a subject. Make adjustment by intercepting all the light from outside.

- ① Mount the TLA280 on the camera and set the glancing angle to 50° and the mode switch to AUTO. Use normal flashing with one bulb.
- ② Set exposure mode to AV, ISO to 100 and exposure compensation to 0.
- ③ Mount the lens (Planar 50/F1.4) and set F-stop to F4.
- ④ Adjust the camera position so that the distance between the subject (standard reflector: reflectance 18%) and the film surface is 2.5 m.
- ⑤ Under these conditions, move the pre-flash lever to light the flash. At this point, measure the exposure with the flash meter and check the error relative to the optimum value.
- ⑥ Change the adjusted value so that the error is 0 ± 0.15 EV.
- ⑦ After input of the adjusted value, light the flash and check the error again for confirmation.

Example:

If the error measured by lighting the flash is -1.6 EV, input an adjusted value -2 to change the error to -0.0 EV. To input and store the adjusted value -2 ,

- ⑧ Set drive mode to SELF 2 SEC and the shutter dial to 1000.
- ⑨ Set the main switch to "AEL" and press the release two times.
- ⑩ At press of the release, the counter display changes like $0 \rightarrow 1 \rightarrow 2$ and the arrow indicating film advance lights up under the figure.
- ⑪ After confirmation of adjustment, set drive mode to X125 and press the release.

(8) Adjustment of flash control display

Adjust the flash control display after completion of (2) ISO resistance adjustment and (7) flash control value adjustment.

Adjustable range: -127 to 127 (-7 EV to 1 EV)

EV value is not corrected in proportion to the change of the adjusted value. This is intended for adjustment of the data before EV conversion.

In adjustment, mount a flash and perform flash control operation using the standard reflector as a subject. Make adjustment by intercepting all the light from outside.

- ① Mount the TLA280 on the camera and set the glancing angle to 50 and the mode switch to AUTO. Use normal flashing with one bulb.
- ② Set drive mode to S, exposure mode to AV, ISO to 100 and exposure compensation to 0.
- ③ Install the standard pressure plate on the aperture and mount the lens "Planar 50/f1.4".
- ④ Press the release to light the flash. At this point, change the adjusted value so that the error display in the viewfinder meets the following conditions:

Aperture	Distance (m)	Indication
F 1.4	2.8	"Over" (all(+) data flickering) or "Proper"
F 1.4	2.0	"Over" when "Proper" at 2.8m
F 1.4	3.2	"Proper" when "Over" at 2.8m
F 16	2.5	"Under" (all(-) data flickering)
F 16	2.0	"Proper" when "Under" at 2.5m
F 16	2.8	"Under" when "Proper" at 2.5m

- ⑤ Input an adjusted value on the plus side to move the indication to the "Over" side.
Input an adjusted value on the minus side to move the indication to the "Under" side.
- ⑥ The flash control value is displayed only for four seconds after flashing. Therefore, after inputting an adjusted value, you must release the shutter several times for confirmation.
- ⑦ Before releasing the shutter, wait until the flash is charged adequately.
- ⑧ Input the adjusted value with drive mode set to SELF 2 SEC and the shutter dial set to 2 (1/2 sec).
- ⑨ After determination of an adjusted value, set the shutter dial to X125 and write the value in EEPROM by pressing the release.

(9) Adjustment of flash metering display

Adjust the flash control display after completion of (2) ISO resistance adjustment and (8) flash metering value adjustment.

Adjustable range: -127 to 127 (-7EV to 1EV)

EV value is not corrected in proportion to the change of the adjusted value. This is intended for adjustment of the data before EV conversion.

In adjustment, mount a flash and perform flash control operation using the standard reflector as a subject. Make adjustment by intercepting all the light from outside.

- ① Mount the TLA280 on the camera and set glancing angle to 50 and the mode switch to AUTO. e normal flashing with one bulb.
- ② Set exposure mode to Av, ISO to 100 and exposure compensation to 0.
- ③ Mount the lens (Planar 50/f1.4) and set F-stop to F4.
- ④ Adjust the camera position so that the distance between the subject (standard reflector: reflectance 18%) and the film surface is 2.0 m.
- ⑤ Move the pre-flash lever to light the flash. At this point, measure the error relative to the correct value with the flash meter. (The error must be nearly 0 EV. If not, make exposure adjustment again.)
- ⑥ With the pre-flash lever in the "ON" position, set drive mode to SELF2 and the shutter dial to 1 S. Under these conditions, the adjusted value can be changed.
- ⑦ Increase and decrease the adjusted value and find a value where the error indication in the viewfinder changes from "Correct" (0 position) to 0.5. (Value displayed at the film counter position. It is minus if the film advance mark is also lit.)
- ⑧ Calculate an adjusted value from the measurement results above and the formulas below.

P: Error measured with the flash meter (EV)

S: Adjusted value where the indication in the viewfinder changes from "Correct" to 0.5.

$$E1 = S + 128 \quad ①$$

$$E2 = E1 \times 7.8125 E-03 \quad ②$$

$$E3 = \text{Loge } E2 \quad [\text{EV}] \quad ③$$

$$E4 = E3 - (0.25 - P) \quad [\text{EV}] \quad ④$$

$$E5 = 2 E4 \quad ⑤$$

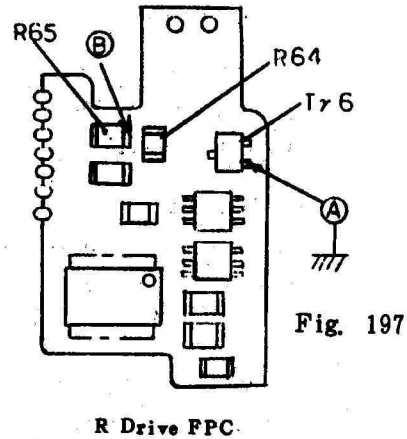
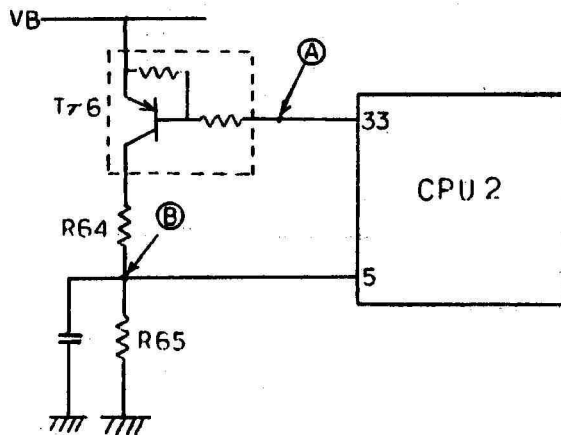
$$E6 = E5 / 7.8125 E-03 \quad ⑥$$

$$E7 = E6 - 128 \quad ⑦$$

The result of E7 rounded is the adjusted value.

(10) Adjustment of B.C. (battery check) level

B.C. Circuit



- ① Short the base terminal of the Tr6 to GND.
- ② Connect the ⊕ and ⊖ terminals of a Regulated DC Power Supply to the camera body. (See below)
- ③ Set the Regulated DC Power Supply to 5.0 V or above.
- ④ Turn on the main switch.
- ⑤ Reset the Regulated DC Power Supply to 4.5 V.

* If the voltage is set to 4.5V at the beginning, the camera does not perform power hold. Once power hold is performed, it is performed even after lowering the voltage (about 3.2V).

- ⑥ Measure the voltage at the point B Input data 1
- ⑦ Measure the voltage V_{DD} (behind the filter) Input data 2

Input

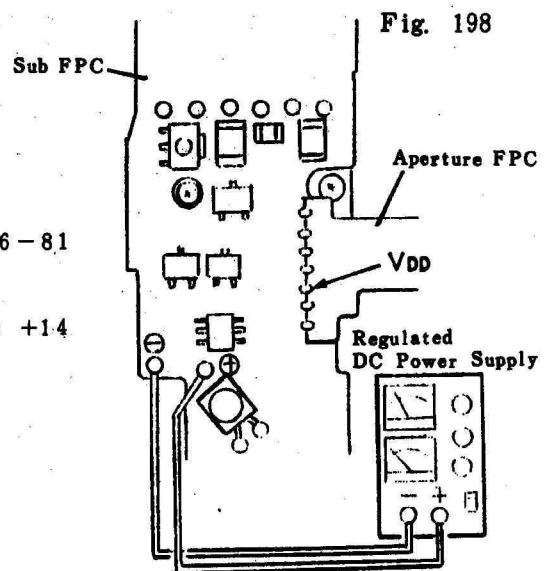
Input data 1: B.C. voltage

Input data 2: V_{DD} voltage

- ⑧ Calculate an adjusted value.

$$B1 \text{ adjusted value} = \frac{(\text{B.C. voltage})}{(V_{DD} \text{ voltage})} \times 256 - 81$$




$$B2 \text{ adjusted value} = (B1 \text{ adjusted value}) + 14$$



⑨ Write the calculated B.1 and B.2 values in EEPROM.

Set the time to X125.

Press the release. (See 2-(3))

Voltage	Display	Camera operation
4.5 V	Mark  not lit Counter display	Normal operation
	Mark  lit Counter display	Normal operation (Battery warning)
4.2 V	Mark  flickering Counter No display	Operation stop

[Notes for adjustment of compensation value]

- After replacing or repairing the main FPC ass'y, make adjustments (1) to (10).
- After replacing or repairing the DC-DC converter, make adjustment of battery check level.
- After replacing or repairing the ISO P.C. board, make adjustments (2) and (4) to (9).
- After replacing or repairing the aperture P.C. board, make adjustments (1) and (4) to (9).
- The adjustable range is -127 to 127, but the film counter displays -99 to 99. EEPROM permits writing of -127 to 127. Practically, however, adjusted values are small.
- After completion of adjustments, remove all the solder from the TEST 1 terminal. If even a little solder remains, the contact cover is raised by the solder, thus spoiling the appearance.

C-3-5 Check and Adjustment of Date Display Position

1. Check of date display position

- ① Install the date position check jig to the back cover hinge.
- ② Make sure that the date LCD is positioned within the slit in the jig.

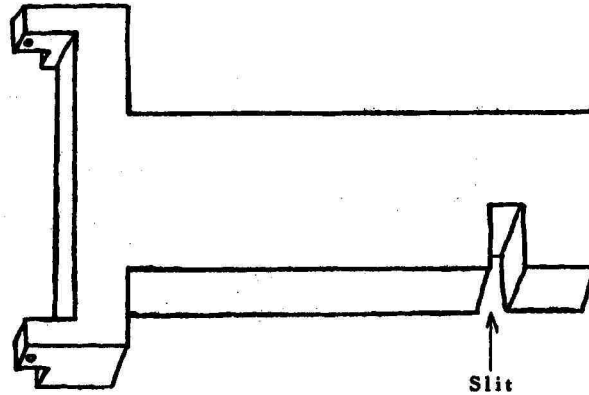


Fig. 199

[Date Position Check Jig]

2. Adjustment of date display position

* After replacing or repair the Date Module, adjust the date position as follows:

- ① Remove the Back Covering (1AA16010).
- ② Move the Date Module so that the date LCD is positioned within the slit in the jig.
- ③ After adjustment, lock the Date Module crazy glue or super glue.

C-3-6 X-synch Terminal

o Delay time

A range: 0.4ms or less (as sensing point at 21mm)

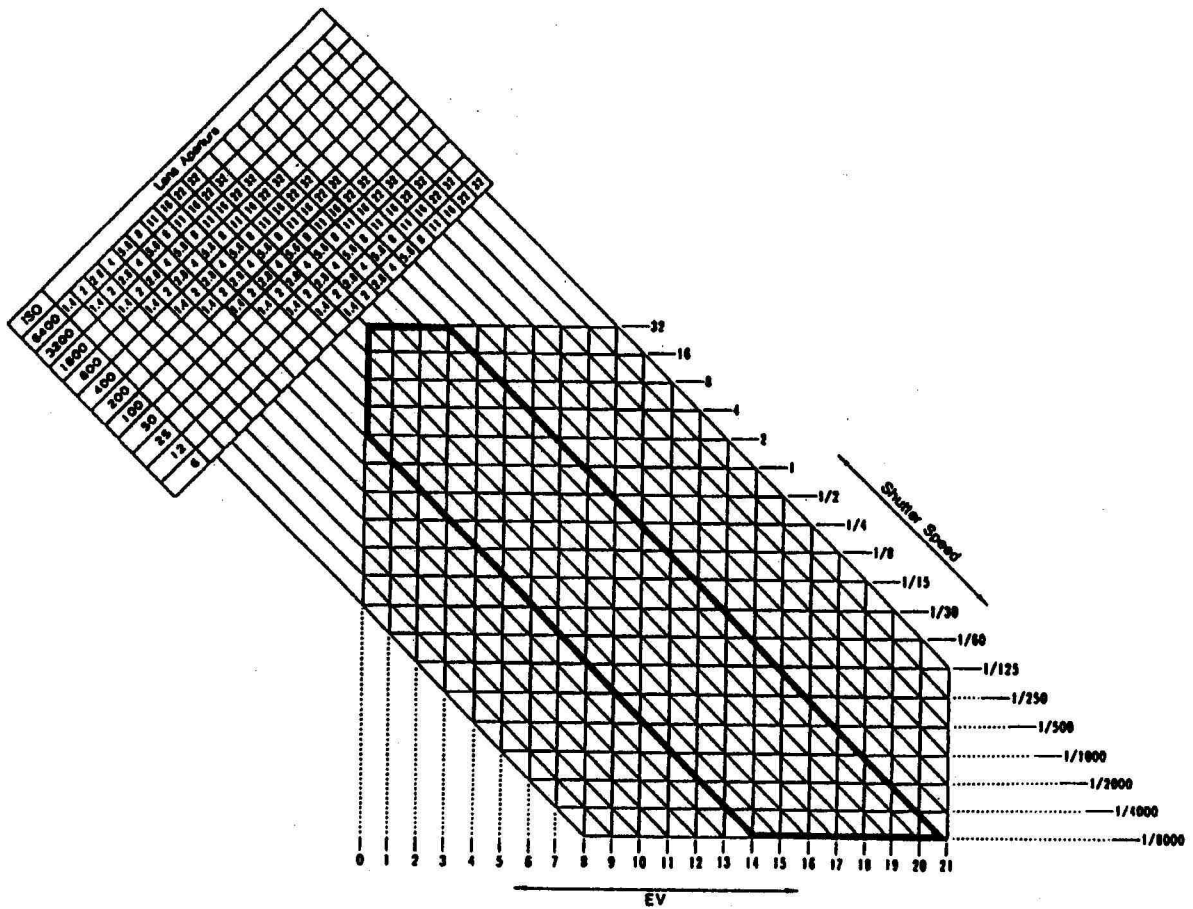
B range: 1.0ms or more

o Contact efficiency

70% or more for time of 1/250 seconds (Manual) or less
(Check with a 1 ms contact efficiency meter.)

C-4 Others

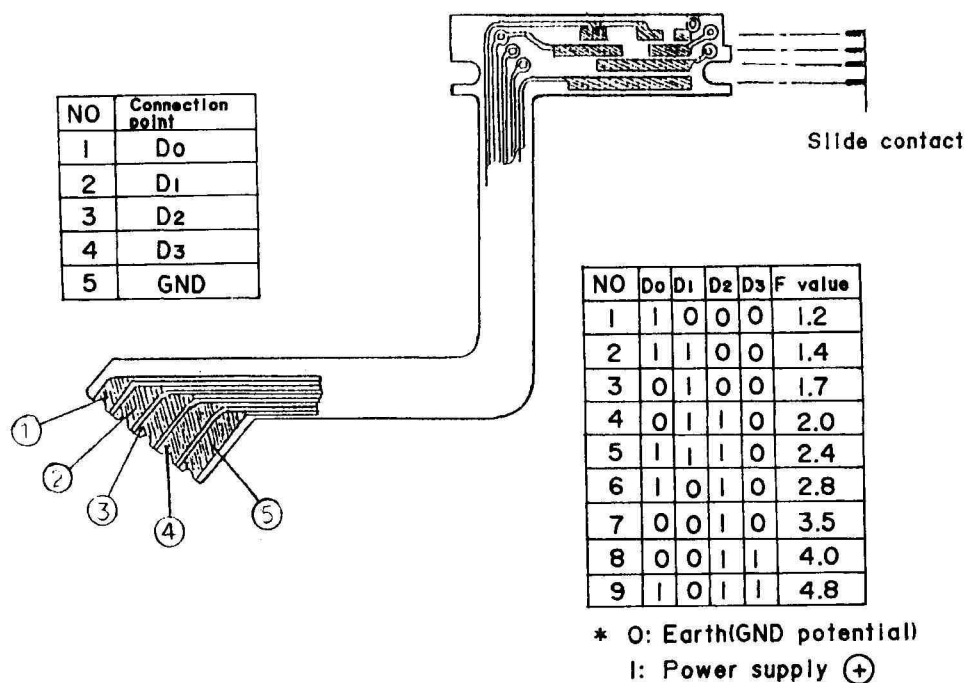
[Metering Linkage Chart]



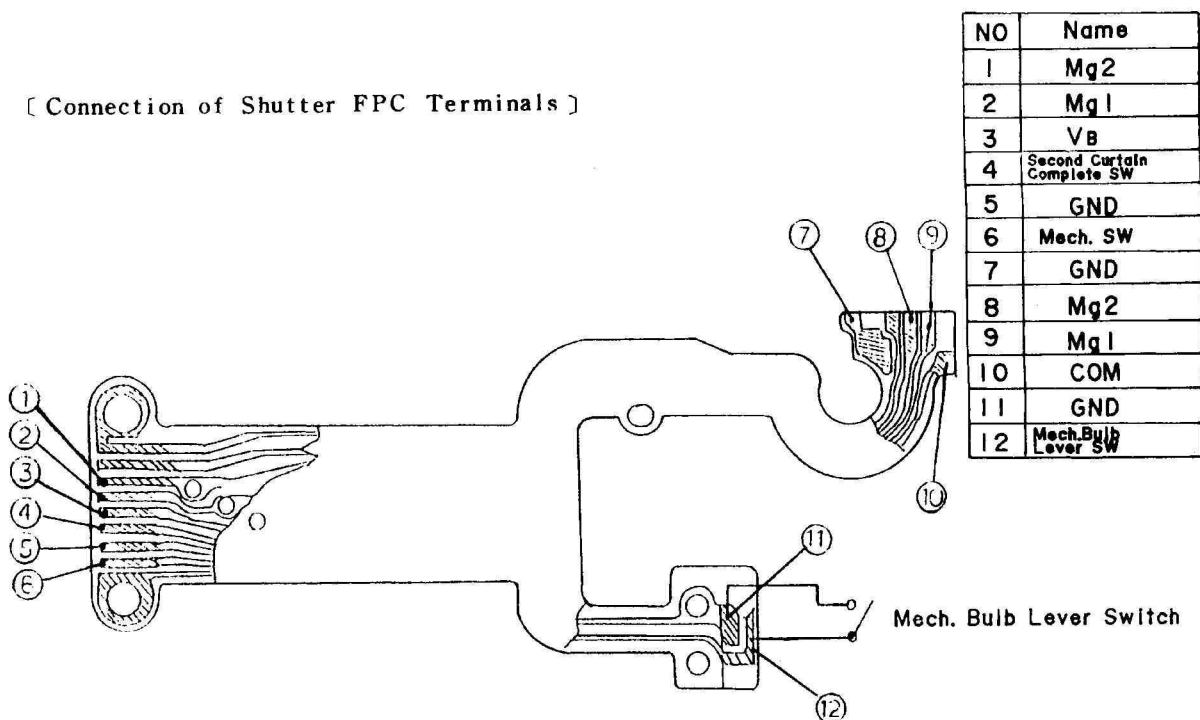
[Current Consumption]

Main Switch off (stand-by current)	30 μ A or less
Main Switch on	80 mA or less
Winding	800 mA or less
Winding stop current	1200 mA or less
Rewinding	1000 mA or less

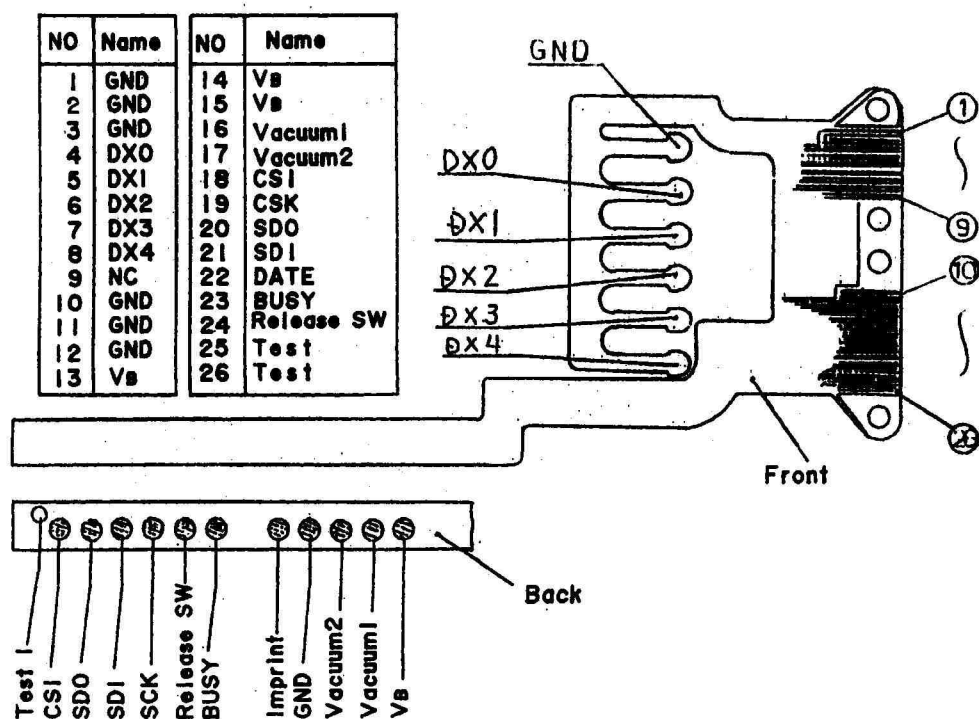
[Connection of Open F. Stop Signal FPC]



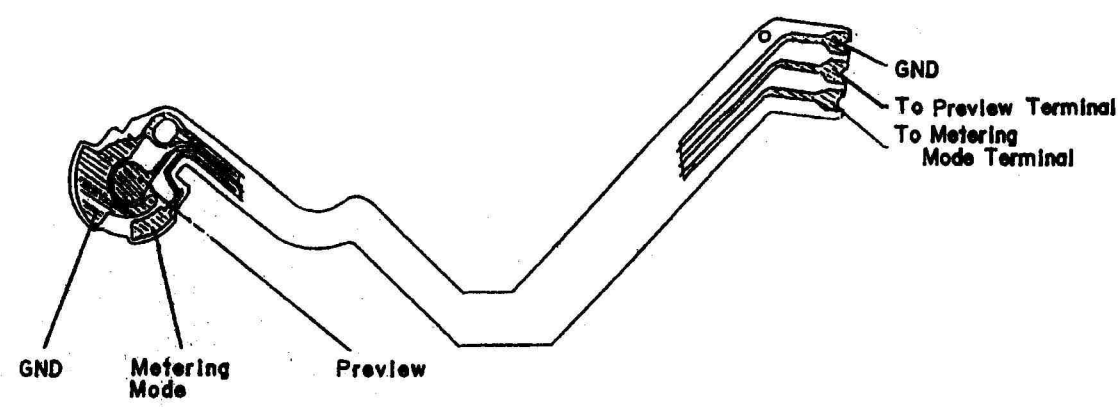
[Connection of Shutter FPC Terminals]



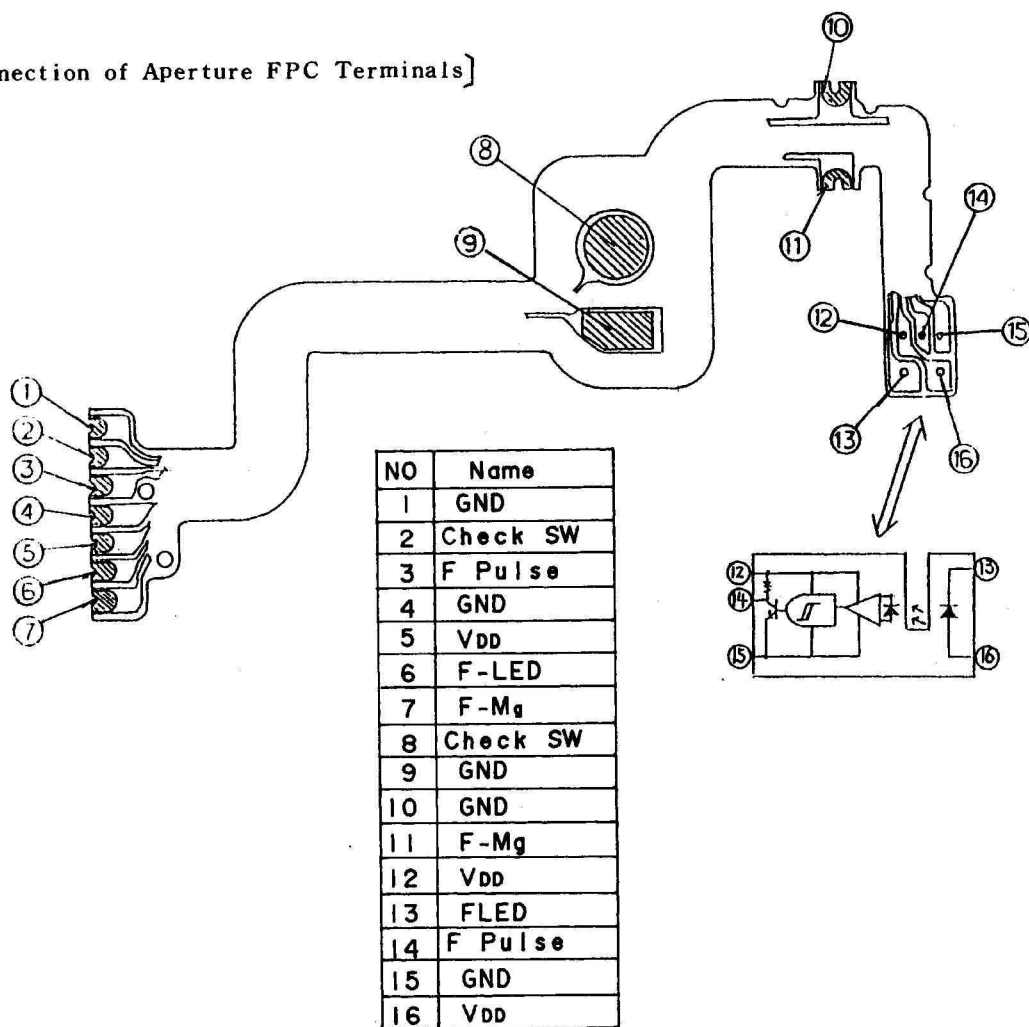
[Connection of DX-FPC]



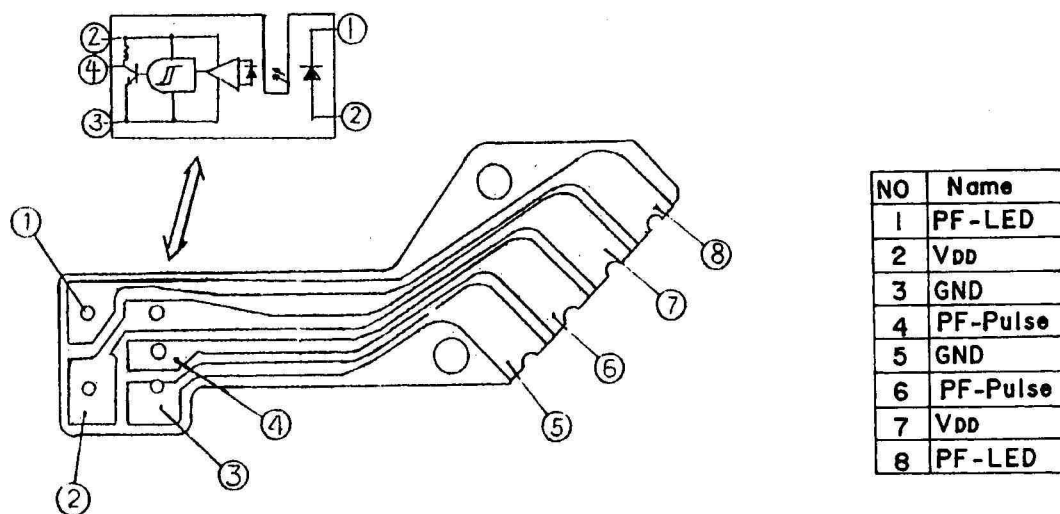
[Connection of Metering Mode FPC]



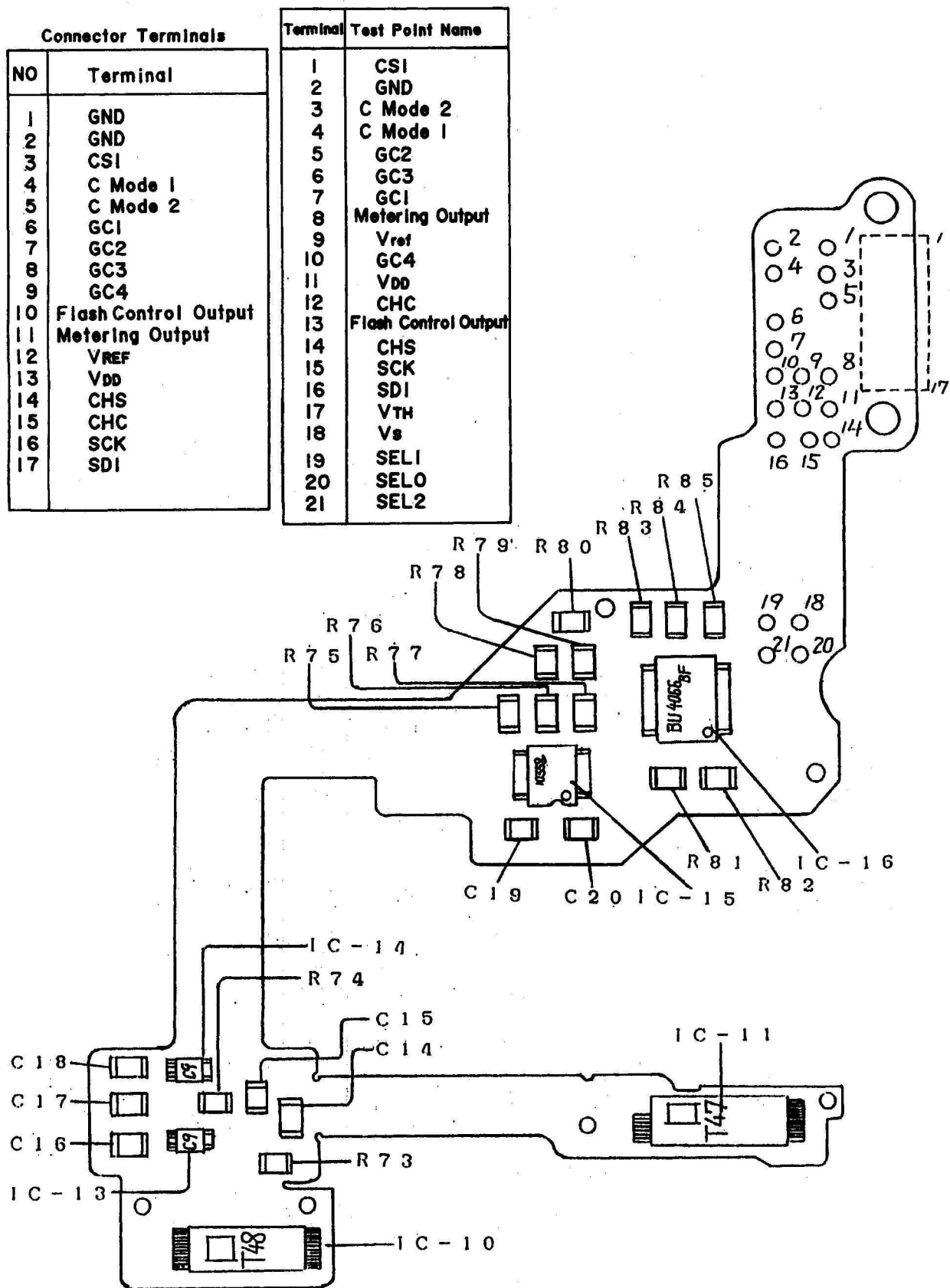
[Connection of Aperture FPC Terminals]

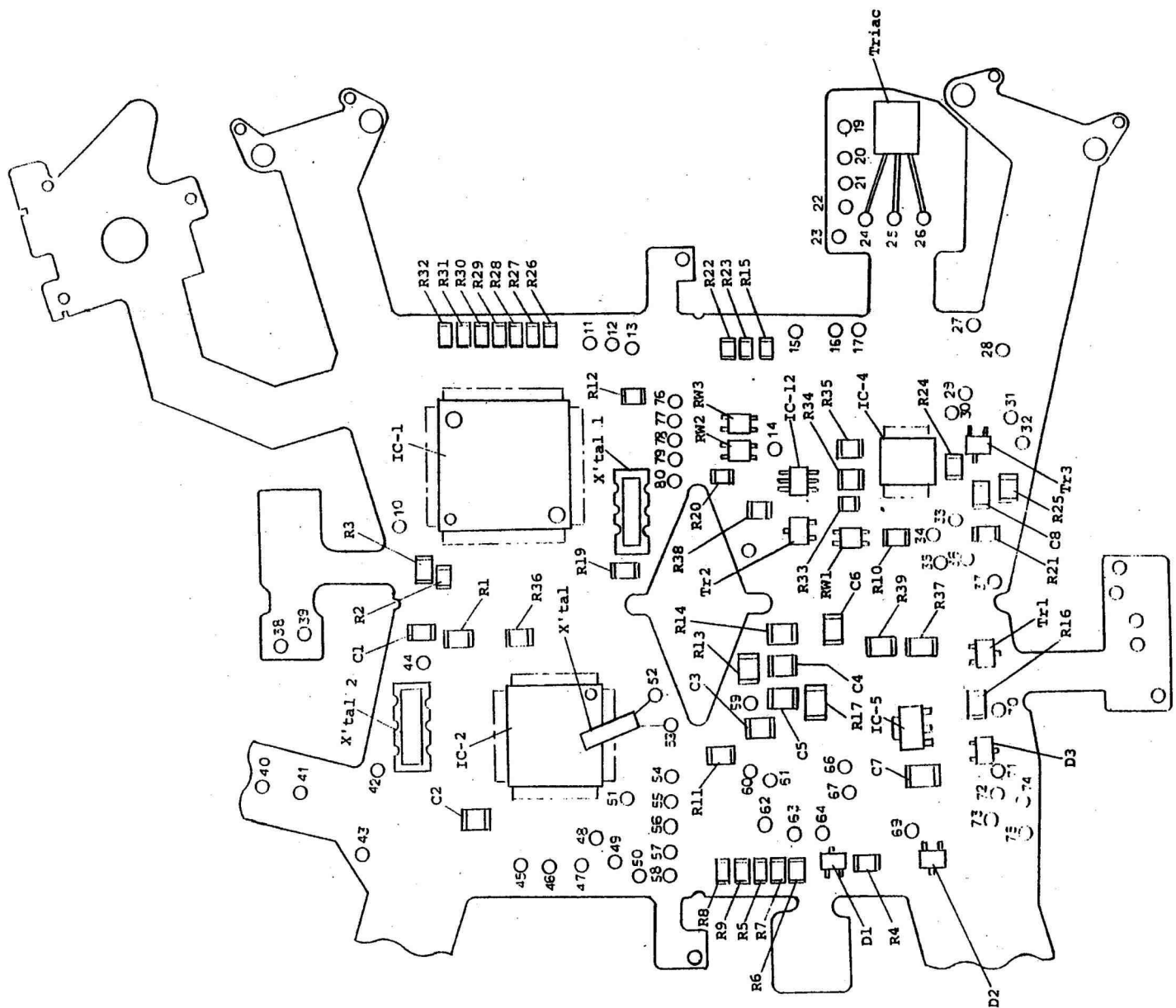


[Connection of Perforation FPC Terminals]



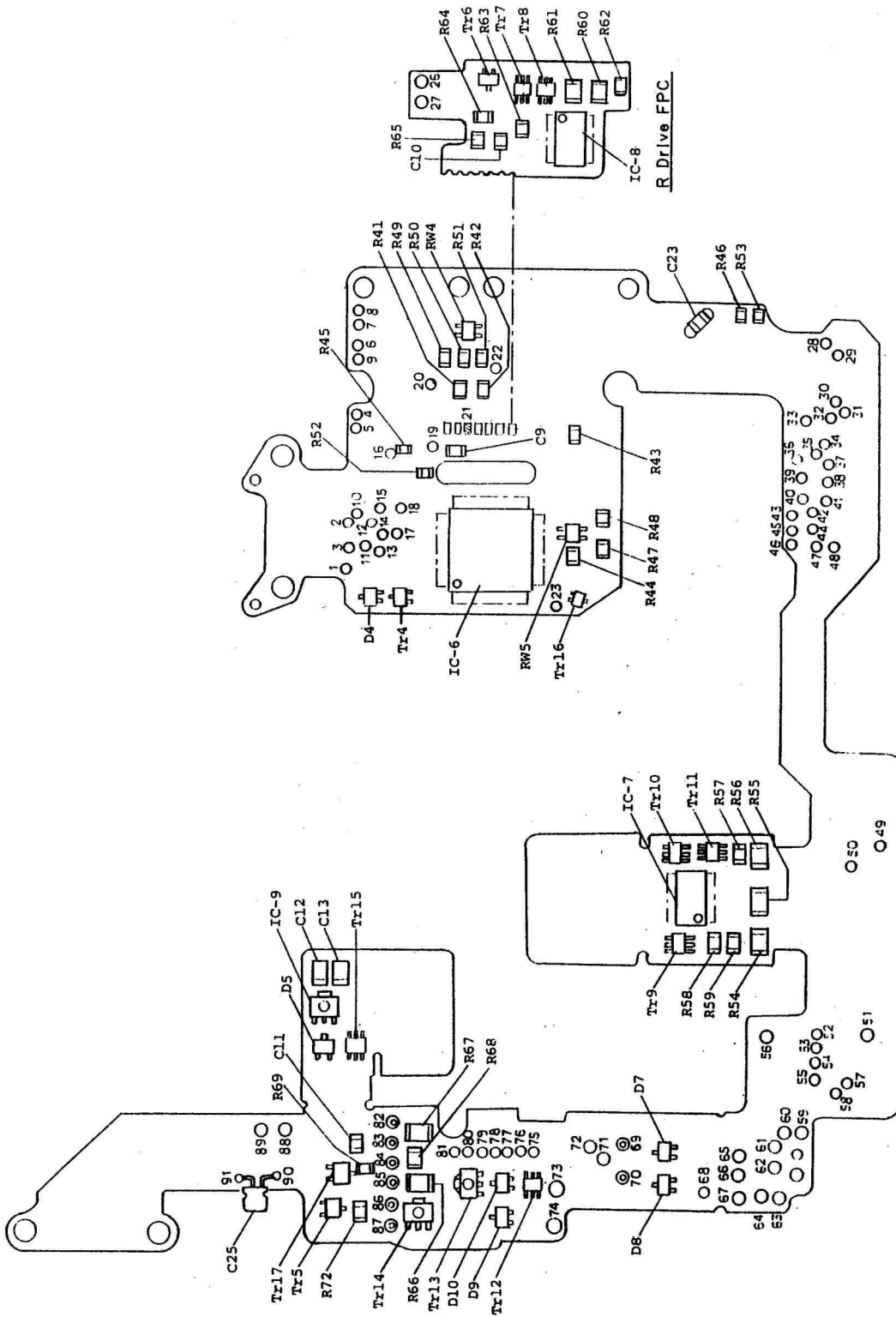
[Parts on Flash Control FPC]



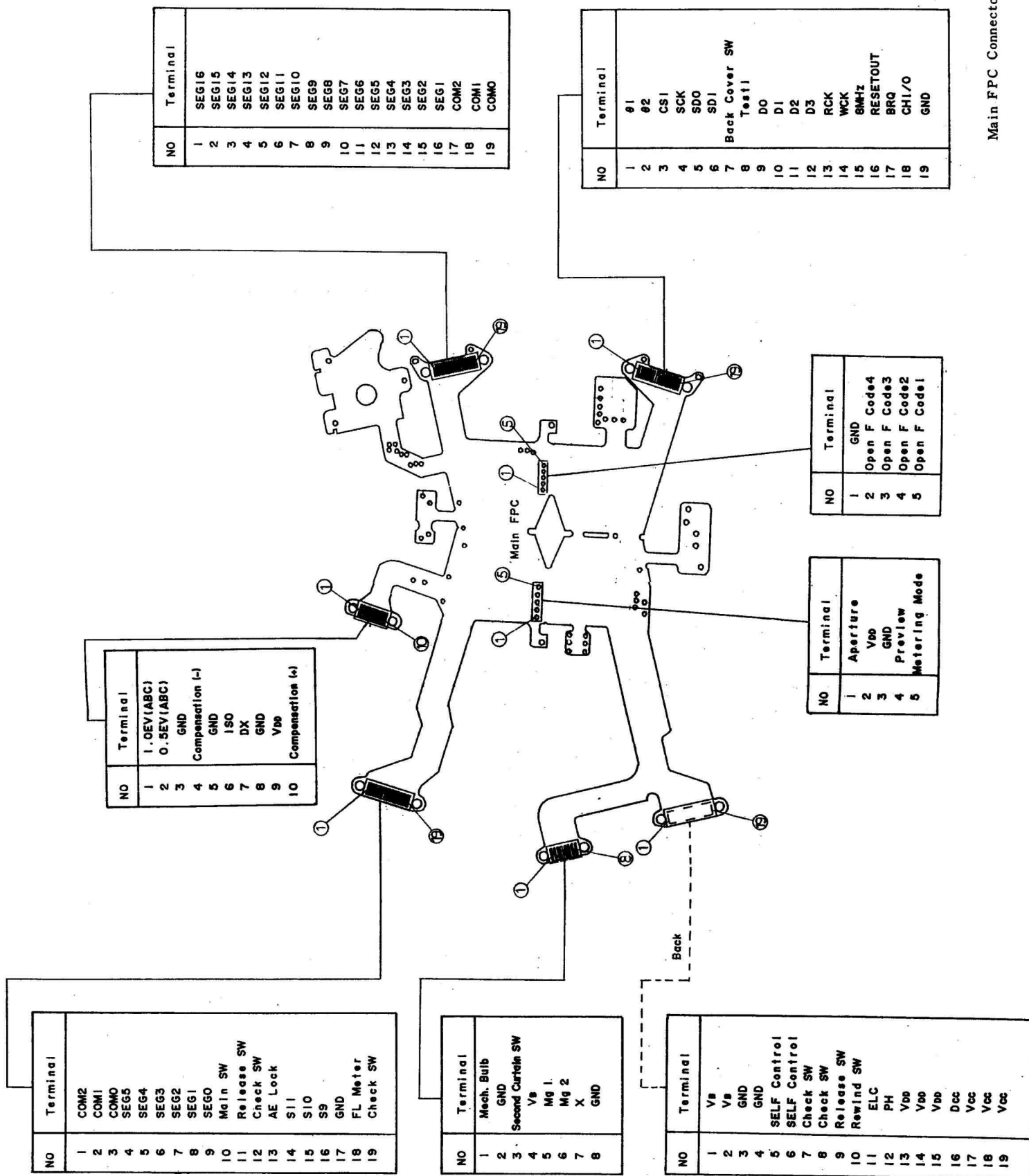


Main FPC Test Point

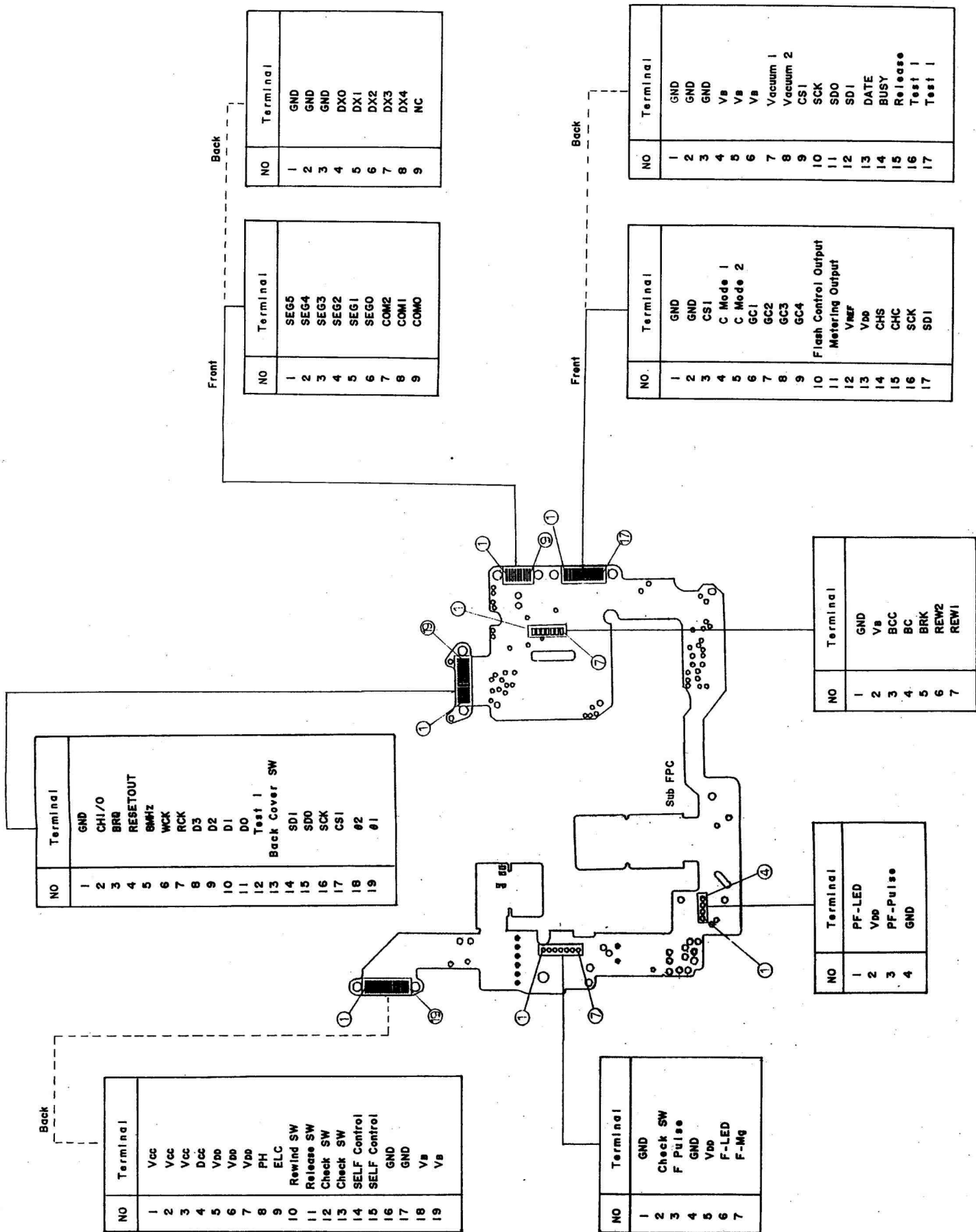
NO	Test Point	NO	Test Point
1	Time Code 1	41	ISO
2	Time Code 3	42	ABC(IEV)
3	Release Socket	43	Compensation (+)
4	Time Code 5	44	4M (Xout)
5	GND	45	TEST2
6	Time Code 4	46	S9
7	Time Code 2	47	S11
8	Exposure Code 2	48	ABC(0.5EV)
9	Exposure Code 1	49	Compensation (-)
10	FL Meter	50	S10
11	D1	51	AE Lock
12	D2	52	32KHz
13	D3	53	32KHz
14	8MHz	54	Metering Mode
15	DO	55	Preview
16	S OUT	56	GND
17	92	57	Vbb
18	SCK	58	Aperture
19	GND	59	32KHz
20	X	60	Reset
21	X	61	SELF Control
22	X	62	Back Cover SW
23	X	63	Check SW
24	X	64	Dcc
25	Thyristor (Ga)	65	LOCK (Main)
26	GND	66	Vcc
27	01	67	Release
28	TEST 1	68	-
29	RCK	69	RevInd SW
30	WCK	70	GND
31	BRQ	71	Vs
32	Thyristor (Ga)	72	Mg 1
33	CSI	73	Mg 2
34	SDI	74	Second Curtain Completion SW
35	AX	75	Mech. Bulb SW
36	CHI/O	76	Open F Code 1
37	GND	77	Open F Code 2
38	Vref	78	Open F Code 3
39	Metering Output	79	Open F Code 4
40	DX	80	GND



Sub FPC Test Point		
NO	Test Point	NO
1	GND	47
2	D2	48
3	Reset input	49
4	DXO	50
5	DX1	51
6	SDO (CPU I)	52
7	CSI (CPU I)	53
8	SCK (CPU I)	54
9	SDI (CPU I)	55
10	D1	56
11	8M (Oscillator)	57
12	D3	58
13	BRQ	59
14	WCK	60
15	D0	61
16	DX2	62
17	RCK	63
18	M-UP SW	64
19	DX4	65
20	DX3	66
21	(BQC present)	67
22	GND	68
23	Vacuum 2	69
24	GND	70
25	Back Cover SW	71
26	Rewind Motor Red	72
27	Rewind Motor Black	73
28	Release SW	74
29	GND	75
30	CHG2	76
31	CHG1	77
32	F-Mg Control	78
33	Charge SW	79
34	WBK	80
35	Revolving Limit SW	81
36	PF-LED	82
37	WIND	83
38	Charge SW	84
39	θ 1	85
40	θ 2	86
41	F Open SW	87
42	F Close SW	88
43	PF Pulse	89
44	GND	90
45	F-LED	91
46	F Pulse	

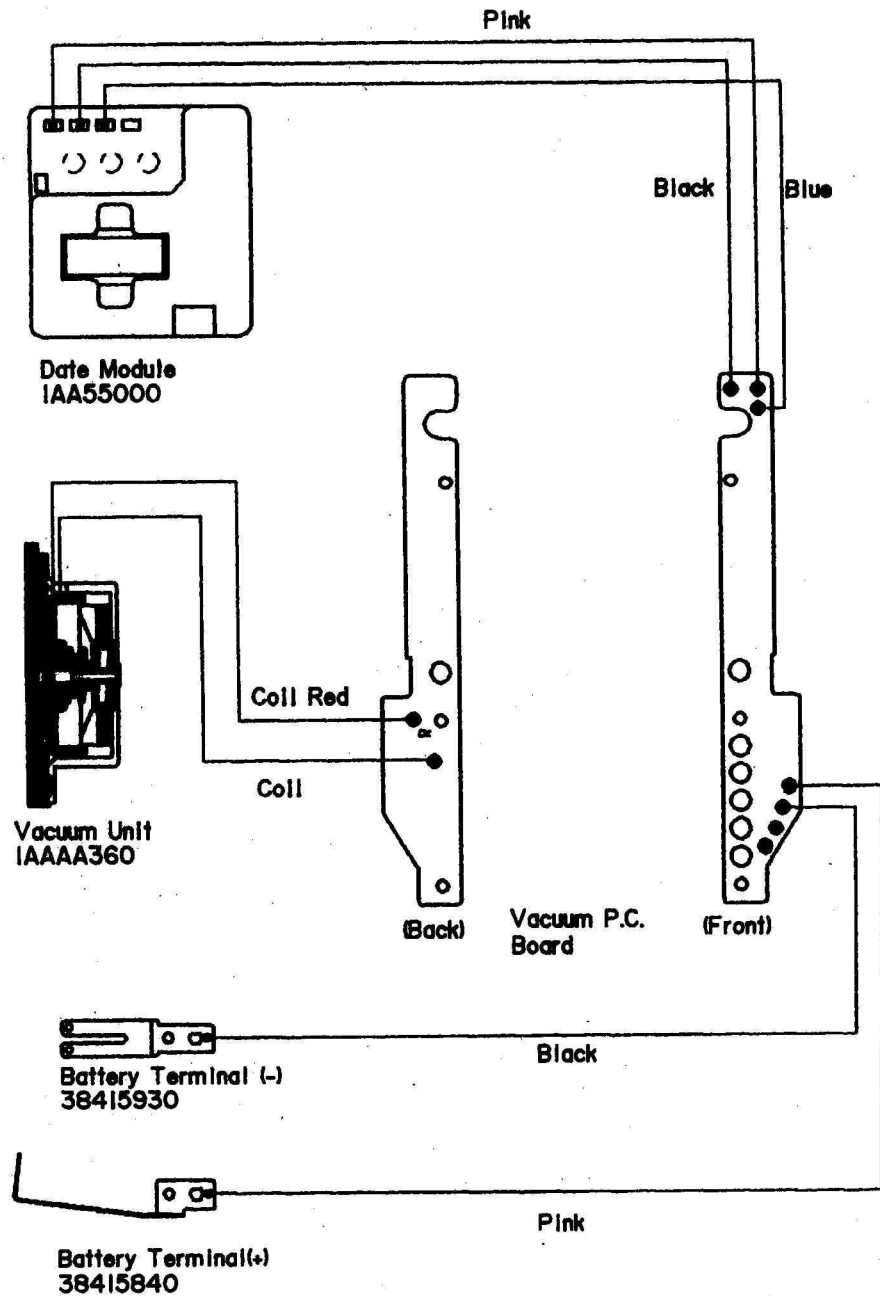


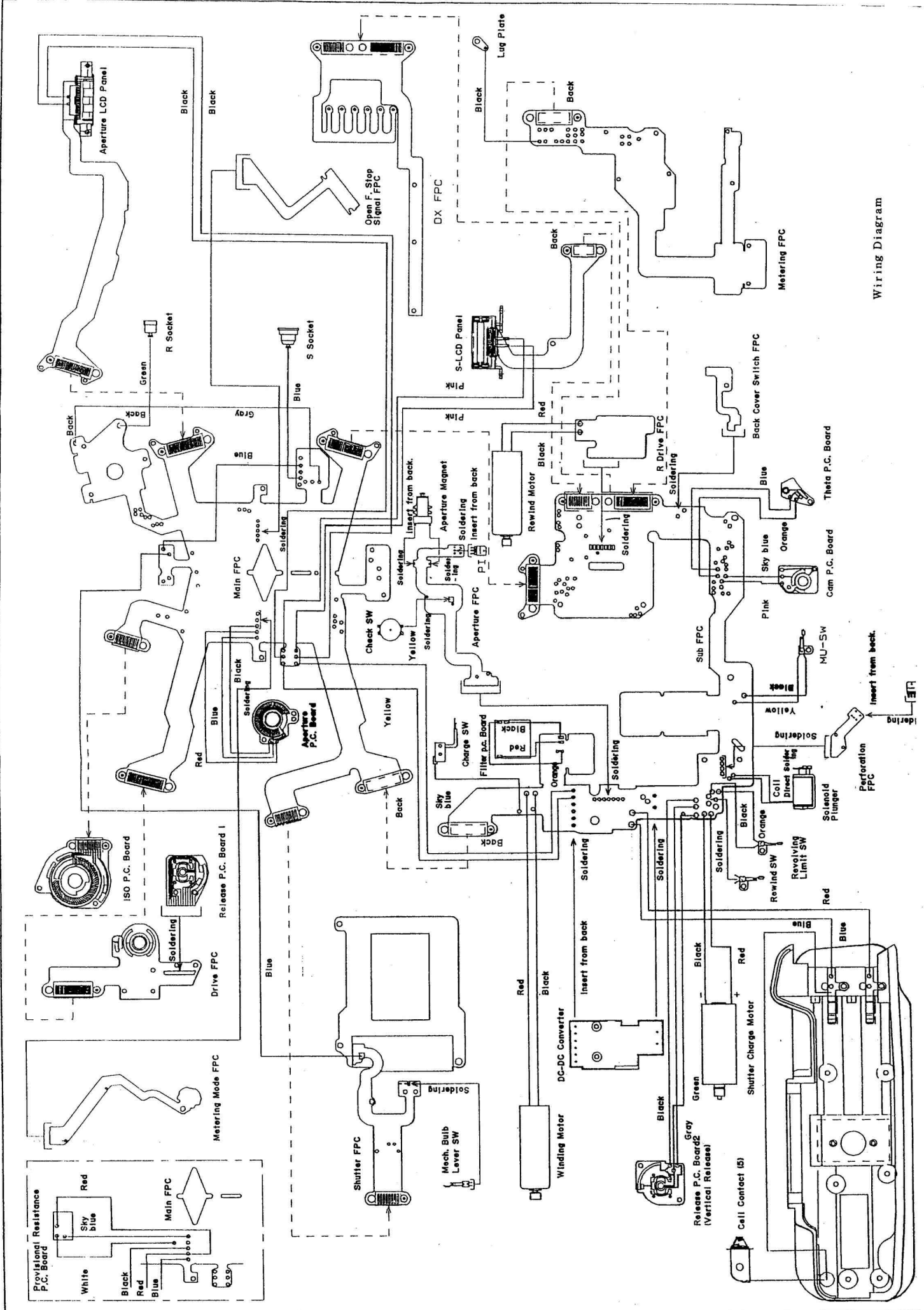
Main FPC Connectors



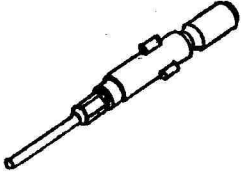
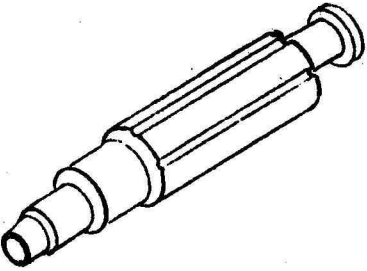
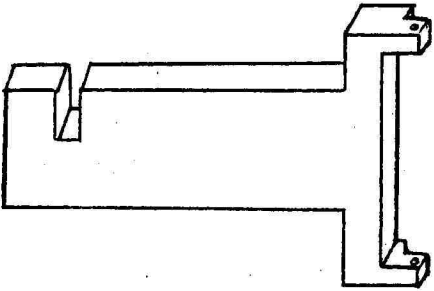
Sub FPC Connectors

RTS III Back Cover Wiring Diagram





List of Special Tools

Tools for tightening sprocket and mode drive dial	
Name: 0.89mm w. cross flat hex wrench No. CL-4000	
Name: Clock driver with wooden handle and cover	
Tools for checking and adjusting date display position	
Name: Date position check jig	
Tool for installing tripod and camera body	
Name: Tripod fixture	